



UNIVERSITY OF BRAWIJAYA
FACULTY OF ADMINISTRATIVE SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION / TOURISM STUDY PROGRAM

SEMESTER LEARNING PLAN

SEMESTER LEARNING PLAN						
SUBJECT	CODE	COURSE CLUBS		WEIGHT (credits)	SEMESTER	Date of Compilation
VIRTUAL REALITY IN TOURISM	PAR60029	MKPPS		3	3	July 20, 2023 Revision I: Revision II:
AUTHORIZATION	RPS Developer Lecturer		RMK Coordinator		Head of Study Program	
	Aniesa Samira Bafadhal, SAB., MAB. Signature		Signature		Dr. Drs. Edy Yulianto, MP Signature	
Learning Outcomes	CPL PROGRAM					
	CPL1	Students are able to integrate nationalistic attitudes, behavioral values and ethics both in the community and work environment.				
	CPL2	Students are able to produce critical and innovative thinking to support business decision making in the tourism sector.				
	CPL3	Students are able to produce scientific studies to answer current issues in the tourism sector.				
	CPL4	Students are able to practice communication skills, both oral and written, effectively.				

	CPL5	Students are able to manage businesses in the tourism sector by prioritizing entrepreneurial values.
	CPL6	Students are able to implement science and technology in solving tourism problems
	CP – MK	
	After taking this course, students are able to	
	CPMK1	Understand the concepts, elements, principles, criteria, types, sources and behavior of customer complaints for complaint management in the tourism and hospitality business (CPL1, CPL2, CPL3, CPL6)
	CPMK2	Understanding and analyzing the components of virtual tourism systems and Virtual Reality, Augmented Reality and Mixed Reality technologies (CPL1, CPL2, CPL3, CPL4, CPL6)
	CPMK3	Understand and explain the concepts and forms of tele-tourism and virtual sensory stimuli (CPL1, CPL2, CPL3, CPL4, CPL6)
	CPMK4	Understand and explain the concept, types and categorization of virtual tourism destination implementation (CPL1, CPL2, CPL3, CPL4, CPL6)
	CPMK5	Design and implement various forms of virtual tourism such as Google Street View, Google AR/VR, Web-VR, 3D VR, 3D AR, Metaverse (CPL1, CPL2, CPL3, CPL4, CPL5, CPL6)
CPMK-CPL Weight Mapping		

	CPL1	CPL2	CPL3	CPL4	CPL5	CPL6
CPMK1	0.4	0.2	0.2	0	0	0.2
CPMK2	0.2	0.2	0.2	0.2	0	0.2
CPMK3	0.1	0.2	0.2	0.2	0.2	0.1
CPMK4	0.1	0.2	0.2	0.2	0.2	0.1
CPMK5	0.1	0.2	0.2	0.2	0.2	0.1

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MK Brief Description	This course is structured as an introduction important in the study and management of virtual tourism based on augmented reality or virtual reality, starting from the basic concept of virtual tourism, introduction of tele-tourists as virtual tourism actors, virtual tourism destinations, required system components, various benefits and challenges that destination managers may get who implement virtual tourism as well as practical work on creating and using 360 panoramic photo content, Web-VR, 3D VR and 3D AR in the context of the tourism business.	
Learning Materials / Topics	<ol style="list-style-type: none"> 1. Virtual World 2. Virtual Tourism 3. <i>Teletourist</i> 4. Virtual Destination 5. Virtual Tourism System Components 6. Benefits of Virtual Tourism 7. Virtual Tourism Challenge 8. Implementation of Virtual Tourism in Tourism business 9. Creating and Using Google Street View for tourism business 10. Understanding and Using Google AR/VR for Tourism Business 11. Understanding and Using Metaverse for Tourism Business 12. Creating and Using Web-VR Panoramic Photo/Video for tourism business 13. Creating and Using 3D VR for Tourism Business 14. Creating and Using 3D AR for tourism business 	
Library	Main	

	<ol style="list-style-type: none"> 1. Cowan, K., Ketron, S., & Kostyk, A. (2023). The Reality of Virtuality: Harnessing the Power of Virtual Reality to Connect with Consumers. De Gruyter. 2. Gravari-Barbas, M., Graburn, N., & Staszak, J.F. (Eds.). (2019). Tourism fictions, simulacra and virtualities. Routledge. 3. Kiper, V. O., & Batman, O. (2020). Virtual Reality Applications in Tourism. In Handbook of Research on Smart Technology Applications in the Tourism Industry (pp. 155-168). IGI Global. 4. Burdea, G. C., & Coiffet, P. (2017). Virtual reality technology. John Wiley & Sons. 5. Arnaldi, B., Guitton, P., & Moreau, G. (Eds.). (2018). Virtual reality and augmented reality: Myths and realities. John Wiley & Sons. 6. Wexelblat, A. (Ed.). (2014). Virtual reality: applications and explorations. Academic Press. 7. tom Dieck, M.C., Jung, T., & Loureiro, S.M. (2019). Augmented reality and virtual reality. Springer International Publishing. 8. Furht, B. (Ed.). (2011). Handbook of augmented reality. Springer Science & Business Media. 9. Milgram, P., Takemura, H., Utsumi, A., & Kishino, F. (1995, December). Augmented reality: A class of displays on the reality-virtuality continuum. In Telemanipulator and telepresence technologies (Vol. 2351, pp. 282-292). Spie. 10. Bafadhal, Aniesa Samira (2021) "Virtual Tourism" in Tourism Management (A Review of Theory and Practice) (Moh Agus Sutiarso, Ed.) (2020) Widina: Indonesia. 11. Bafadhal, Aniesa Samira (2020), "Virtual Tourism Practicum in Tourism", Teaching Module, Brawijaya University 	
	Supporters	

	<ul style="list-style-type: none"> a. Guttentag, D., Griffin, T., & Lee, S. H. (2018). The future is now: how virtual reality and augmented reality are transforming tourism. The Sage handbook of tourism management, 443-462. b. Rainoldi, M., Driescher, V., Lisnevskaya, A., Zvereva, D., Stavinska, A., Relota, J., & Egger, R. (2018). Virtual reality: an innovative tool in destinations' marketing. The Gaze: Journal of Tourism and Hospitality, 9(1), 53-68. c. Bulchand-Gidumal, J., & William, E. (2020). Tourists and augmented and virtual reality experiences. Handbook of e-Tourism, 1-20. d. Bafadhal, AS, & Hendrawan, MR (2023). Does Virtual Hotel Shifting Realities or Just Daydreaming? A Wake-Up Call. Digital Transformation of the Hotel Industry: Theories, Practices, and Global Challenges, 37-64. Springer e. Bafadhal, AS & Hendrawan., MR, (2021) Towards Infinity and Beyond Reality: Cutting-Edge Virtual Museum in Globalization of Cultural Heritage: Issues, Impacts and Challenges (Nordiana Mohd Nordin, Ed.), UMT Press : Malaysia f. Hendrawan, MR, & Bafadhal, AS (2022). Virtual museum. Buhalis, Dimitrios, Encyclopedia of tourism management and marketing. Edward Elgar Publishing, Cheltenham. g. Bafadhal, AS, & Hendrawan, MR (2023). Actual Practicum Course vs. Virtual Living Lab in Tourism Education: Alike and Unlike at Once. In Mobile and Sensor-Based Technologies in Higher Education (pp. 202-231). IGI Global. 	
Instructional Media	Software:	Hardware:
	Ms Office Gmeet/Zoom, GCR, VLM AR developer software VR software developer	Smart TV, WiFi, Laptop, VR Headset, Smart Phone
Team Teaching	1. Aniesa Samira Bafadhal, SAB, MAB. 2.	
Course Requirements	-	

Week 2-	Sub-CP-MK (as the expected final capability)	Indicator	Assessment Criteria & Forms	Learning methods (Lectures / Assignments / other forms of learning)	Time (Duration)	Learning Materials / Study Materials [Library]	Assessm ent Weight (%)
1	Students are able to understand and explain the basic concepts of the virtual world (Metaverse)	Students can: 1. Explaining the concept of virtual world and its relation to tourism business 2. Explaining the characteristics of the virtual world 3. Explaining the differences between VR/AR/AV/MR	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Class Discussion and Assignments Test basis: UTS 	<ol style="list-style-type: none"> Lecture Question and answer Structured tasks Independent assignment 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Virtual World (Metaverse) Characteristics of Virtual World Reality-Virtuality Continuum Model and Extended Reality Technology [9]; [10] 	5%
2	Students are able to understand and explain the basic concepts of virtual tourism	<ol style="list-style-type: none"> Explaining the meaning of virtual tourism Explaining the background to the emergence of virtual tourism 	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: 	<ol style="list-style-type: none"> Lecture and Q&A Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Understanding and Basic Concepts of Virtual Tourism Difference between Virtual Tourism and Online Tourism, Digital Tourism, Electronic Tourism 	8%

		3. Explaining the debate regarding the presence of virtual tourism	Group Presentations, Class Discussions and Assignments b. Test basis: UTS			3. Supporting Factors for the Concept and Implementation of Virtual Tourism 4. Cons of the Concept and Implementation of Virtual Tourism 1]; [2]; [3]; [10]	
3	Students are able to understand and explain the concept of Tele-Tourist	Students can: 1. Explaining the meaning of tele-tourism 2. Explain what the various forms of virtual sensory representation are	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: a. Non-exam basis: Group Presentations, Class Discussions and Assignments b. Test basis: UTS 	a. Lecture and Q&A b. Group presentations and class discussions	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	1. Tele-tourist concept 2. Variations in the form of self-embodiment in virtual tourism 3. Virtual sense representation and supporting technologies: visual, olfactory, tactile/haptic, gustatory [1]; [4];[5]; [6]; [10]	5%
	QUIZ I						
4	Students are able to understand and explain	Students can:	<ul style="list-style-type: none"> Assessment criteria: Understanding 	a. Lecture and Q&A	[TM:3x50']	1. Virtual Destination Concept	6%

	the concept of Virtual Destinations	<ol style="list-style-type: none"> 1. Explaining virtual destination categories 2. Explaining the implementation of best practice virtual destinations 	<ul style="list-style-type: none"> • Form of assessment: <ol style="list-style-type: none"> a. Non-exam basis: Group Presentations, Class Discussions and Assignments b. Test basis: UTS 	<ol style="list-style-type: none"> b. Group presentations and class discussions 	[BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> 2. Concept and On-site Implementation of Virtual Tourism Destinations 3. Concept and Implementation of Online Virtual Tourism Destinations 4. Implementation of virtual reality in the fields of transportation, accommodation, culinary, and tourist attractions [2]; [3]; [10]; [a]; [b]; [c]	
5	Students are able to understand and explain the components of the virtual tourism system.	<ol style="list-style-type: none"> 1. Explaining the standard equipment of virtual tourism 2. Describes the components of low-immersive VR, semi-immersive VR, 	<ul style="list-style-type: none"> • Assessment criteria: Understanding • Form of assessment: <ol style="list-style-type: none"> a. Non-exam basis: Group Presentations, Class Discussions 	<ol style="list-style-type: none"> a. Lecture and Q&A b. Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> 1. Hardware and Software Supporting Virtual Tourism 2. Virtual tourism system component categories; <i>low immersive</i> VR, semi-immersive VR, fully-immersive VR [1]; [4];[5]; [6]; [10]	8%

		fully-immersive VR virtual tourism systems.	and Assignments b. Test basis: UTS				
6	Able to understand and explain the benefits of virtual tourism	Students are able to: 1. Explaining the benefits of virtual tourism from a macro perspective 2. Explaining the benefits of virtual tourism from a meso perspective 3. Explaining the benefits of virtual tourism from a micro perspective	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: a. Non-exam basis: Group Presentations, Class Discussions and Assignments b. Test basis: UTS 	a. Lecture and Q&A b. Group presentations and class discussions	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	1. Benefits of virtual tourism from a macro perspective 2. Benefits of virtual tourism from a meso perspective 3. Benefits of virtual tourism from a micro perspective [2]; [3]; [10]	8%
7	Able to understand and explain the challenges of virtual tourism	Students can explain the internal and external challenges that can hinder the implementation of virtual tourism in tourism businesses.	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: a. Non-exam basis: 	a. Lecture and Q&A b. Group presentations and class discussions	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	1. Internal challenges of virtual tourism 2. External challenges of virtual tourism [2]; [3]; [10]	8%

			Group Presentations, Class Discussions and Assignments b. Test basis: UTS				
8	UTS						
9	Virtual Hotel, Virtual Theme Park, Virtual Museum in Tourism business	Students are able to understand and explain the concept and application of virtual reality, augmented reality and Metaverse in tourism businesses such as hotels, theme parks and museums.	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Group Presentations, Class Discussions and Assignments Test basis: UTS 	<ol style="list-style-type: none"> Lecture and Q&A Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Concept, Categorization and Implementation of Virtual Hotel Concept, Categorization and Implementation of Virtual Theme Park Concept, Categorization and Implementation of Virtual Museum [d]; [e]; [f]	10%
10	Students are able to create and use Google Street View	Students are able to follow all stages of creating virtual	<ul style="list-style-type: none"> Assessment criteria: Understanding 	<ol style="list-style-type: none"> Lecture and Q&A 	[TM:3x50']	<ol style="list-style-type: none"> Introduction to the required software and hardware 	10%

		tourism based on Google Street View.	<ul style="list-style-type: none"> Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Group Presentations, Class Discussions and Assignments Test basis: UTS 	<ol style="list-style-type: none"> Group presentations and class discussions 	[BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Create 360° photos with a 360° camera Create photos with the 360° camera mobile application Using/importing 360° photos for virtual tourism using Google Street View [11]	
11	Students are able to create and use Google AR/VR	Students are able to follow all stages of making and practicing virtual tourism guides based on Google AR/VR	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Group Presentations, Class Discussions and Assignments Test basis: UTS 	<ol style="list-style-type: none"> Lecture and Q&A Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Introduction to the required software and hardware Create a virtual travel route using Google AR/VR Guiding virtual tours using Google AR/VR [11]	10%

12	Students are able to create and use Metaverse for tourism business	Students understand and are able to explain the use of Metaverse such as SecondLife for tourism businesses.	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Group Presentations, Class Discussions and Assignments Test basis: UTS 	<ol style="list-style-type: none"> Lecture and Q&A Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Introduction to the required software and hardware Creating a tourism business using Metaverse like Secondlife Guiding virtual tourism using the Metaverse [11]	10%
QUIZ II							
13	Students are able to create and use web-VR	Students are able to follow all stages of making and practicing virtual tourism guides based on web-VR with A-Frame software	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Group Presentations, Class Discussions and 	<ol style="list-style-type: none"> Lecture and Q&A Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Introduction to the software and hardware required Understanding the standard HTML Programming Language especially the Programming Language Create and guide web-based VR 	10%

			Assignment s b. Test basis: UTS			virtual tours using A-Frame [11]	
14	Students are able to create and use 3D-VR	Students are able to follow all stages of making and practicing virtual tourism guides based on 3D-VR with Millealab Creator and Millealab Viewer software	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Group Presentations, Class Discussions and Assignments Test basis: UTS 	<ol style="list-style-type: none"> Lecture and Q&A Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Introduction to the software and hardware required Creating 3D-based virtual tourism content using Millealab Creator Tour guide using 3D based virtual tourism using Millealab Viewer [11]	10%
15	Students are able to create and use 3D-AR (Augmented Reality)	Students are able to follow all stages of creating tourism and hospitality promotional media based on 3D-AR with Assemblr software	<ul style="list-style-type: none"> Assessment criteria: Understanding Form of assessment: <ol style="list-style-type: none"> Non-exam basis: Group Presentations 	<ol style="list-style-type: none"> Lecture and Q&A Group presentations and class discussions 	[TM:3x50'] [BM+TT : {1+1}x{3x60'}]	<ol style="list-style-type: none"> Introduction to the software and hardware required Creating AR 3D based tourism and hospitality business promotion media using Assemblr EDU (mobile application) 	10%

			ns, Class Discussions and Assignment s a. Test basis: UTS			3. Creating AR 3D based tourism and hospitality business promotion media using Assembler Studio (web-based desktop application) 4. Using 3D AR based virtual tourism using Assemblr Viewer [11]	
16	UAS						

CPL PS Tourism

The learning outcomes of graduates (CPL) of the UB Tourism Study Program are as follows.

CPL1. Students are able to integrate nationalistic attitudes, behavioral values and ethics both in the community and work environment.

CPL2. Students are able to produce critical and innovative thinking to support business decision making in the tourism sector.

CPL3. Students are able to produce scientific studies to answer current issues in the field of tourism.

CPL4. Students are able to practice communication skills, both oral and written, effectively.

CPL5. Students are able to manage a business in the tourism sector by prioritizing entrepreneurial values.

CPL6. Students are able to implement science and technology in solving tourism problems.

ASSIGNMENT DESIGN

The assignments carried out in this lecture are in the form of Structured Assignments and Independent/Group Assignments.

- Structured lecture assignments are independent assignments, namely students submitting a written review of the results of the lecture at that meeting, and then presenting it at the next meeting.
- Independent/group assignments consist of creating individual/group papers in the form of reviews of each material, and presented in class.

Percentage of Assessment

Types of Assessment	Weight
Task	10%
Quiz	5 %
UTS	15%
Project/Case Base	50%
UAS	20%

CPL assessment and evaluation table at MK

Week to:	CPL	CPMK	Questions (Weight%)	Assessment Weight (test/non-test)	Weight (%)
1	1,2,3	1	Task 1 Essay Quiz Questions 1 (Material 1)	2.5 2.5	5
2	1,2,3	1	Task 2 Essay Quiz Questions 1 (Material 2) Mid-term exam questions (Question 1)	2.5 2.5 3	8
3	1,2,3	1	Task 3 Essay Quiz Questions 1 (Material 3)	2.5 2.5	5
	1,2,3	1	QUIZ I: material 1, material 2, and material 3		
4	1,2,3,4	2	Task 4 Mid-term exam questions (Question 2)	3 3	6

5	1,2,3,4	2	Task 5 Mid-term exam questions (Question 3)	4 4	8
6	1,2,3,4,6,	2,3,4	Task 6 Mid-term exam questions (Question 4)	4 4	8
7	1,2,3,4,6,	2,3,4	Task 6 Mid-term exam questions (Question 4)	4 4	8
8 Mid-Semester Exam (UTS): Question 1, Question 2, Question 3, and Question 4					
9	1,2,3,4	2,3,4	Task 7 Essay Quiz Questions 2 (Material 4) Final Exam Questions (Question 5)	2.5 2.5 5	10
10	1,2,3,4,6,	2,3,4	Task 8 Essay Quiz Questions 2 (Material 5)	5 5	10
	1,2,3,4,6,	2,3,4	Task 9 Essay Quiz Questions 2 (Material 6)	5 5	10
11	1,7,8	2,3,4	QUIZ 2: Material 4, Material 5, and Material 6		
12	1,2,3,4	2,3,5	Task 10 Final Exam Questions (Question 6)	5 5	10
13	1,2,3,4	2,3,5	Task 11 Final Exam Questions (Question 7)	5 5	10
14	1,2,3,4,6,	2,3,5	Task 12	5 5	10

			Final Exam Questions (Question 8)		
15					
16.	Final Semester Exam (UAS): Question 5, Question 6, Question 7, and Question 8				
Total weight (%)				100	100

DETERMINATION OF FINAL VALUE

Final Value Range (NA)	Quality Letters	Quality Score
> 80	A	4
75 < NA ≤ 80	B+	3.5
69 < NA ≤ 75	B	3
60 < NA ≤ 69	C+	2.5
55 < NA ≤ 60	C	2
50 < NA ≤ 55	D+	1.5
44 < NA ≤ 50	D	1
0 < NA ≤ 44	E	0

Assessment Weight Mapping - CPMK

Assessment	CPMK1	CPMK2	CPMK3	CPMK4	CPMK5
Quiz 1	1	0	0	0	0
Quiz 2	0	0.3	0.3	0.4	0

Task 1	1	0	0	0	0
Task 2	1	0	0	0	0
Task 3	1	0	0	0	0
Task 4	0	1	0	0	0
Task 5	0	1	0	0	0
Task 6	0	0.4	0.4	0.2	0
Task 7	0	0.2	0.3	0.5	0
Task 8	0	0.2	0.3	0.5	0
Task 9	0	0.2	0.4	0.4	0
Task 10	0	0.2	0.2	0	0.6
Task 11	0	0.2	0.2	0	0.6
Task 12	0	0.2	0.2	0	0.6
UTS1	0.4	0.3	0.3	0	0
UAS1	0	0	0.3	0.3	0.4