Module Handbook

Animation

Bachelor of Visual Communication Design Program
Faculty of Creative Design and Digital Business
Institut Teknologi Sepuluh Nopember

Lamp

	No.	Deskripsi
☐	1.	Mampu menunjukkan sikap dan karakter yang mencerminkan ketakwaan kepada Tuhan YME, berbudi pekerti luhur, peka dan peduli terhadap masalah sosial dan lingkungan, menghargai perbedaan budaya dan kemajemukan, menjunjung tinggi penegakan hukum, mendahulukan kepentingan bangsa dan masyarakat luas, melalui inovasi, kreatifitas, dan potensi lain yang dimiliki. *Capable of exemplifying attitudes and virtues indicative of a profound commitment to the divine, possessing noble character, demonstrating sensitivity to and concern for social and environmental issues, exhibiting respect for cultural diversity and pluralism, upholding the principles of law enforcement, and prioritizing the welfare of the nation and broader community. This is achieved through the application of innovation, creativity, and leveraging the inherent potential possessed by oneself and others.*
☐	2.	Mampu mengkaji dan memanfaatkan ilmu pengetahuan dan teknologi dalam rangka mengaplikasikannya pada bidang keahlian desain komunikasi visual, serta mampu mengambil keputusan secara tepat dari hasil kerja sendiri maupun kerja kelompok melalui pemikiran logis, kritis, sistematis dan inovatif. *Proficient in the examination and application of scientific and technological principles for the enhancement of expertise in visual communication design. Capable of rendering judicious decisions based on individual and collaborative endeavors, employing logical, critical, systematic, and innovative thinking to interpret and utilize outcomes effectively.*
☑	3.	Mampu mengelola pembelajaran diri sendiri, dan mengembangkan diri sebagai pribadi pembelajar sepanjang hayat untuk bersaing ditingkat nasional, maupun internasional, dalam rangka berkontribusi nyata untuk menyelesaikan masalah dengan memperhatikan prinsip keberlanjutan. *Competent in self-directed learning management and committed to personal development as a lifelong learner, with the aim of remaining competitive at both national and international echelons. This pursuit is geared toward making substantive contributions to problem-solving endeavors, underscored by a dedicated adherence to sustainability principles.*
☑	4.	Mampu mengkaji dan mengaplikasikan teori dan prinsip desain komunikasi visual *Proficient in the examination and application of theories and principles within the realm of visual communication design.*
☐	5.	Mampu mengkaji dan mengaplikasikan ilmu dan media komunikasi *Competent in the exploration and application of knowledge about communication media.*
☐	6.	Mampu mengkaji dan mengaplikasikan ilmu sosial budaya yang terkait dengan desain komunikasi visual *Proficient in the examination and application of socio-cultural knowledge relevant to the field of visual communication design.*
☐	7.	Mampu mengkaji dan mengaplikasikan ilmu dan keterampilan menggambar, membuat sketsa, dan membuat prototipe *Competent in the examination and application of knowledge and skills in drawing, sketching, and prototyping.*
☐	8.	Mampu mengkaji dan mengaplikasikan kreatifitas dan design thinking *Proficient in the exploration and application of creativity and design thinking.*
☐	9.	Mampu mengkaji dan mengaplikasikan ilmu manajemen dan komunikasi marketing dalam bidang desain komunikasi visual *Competent in the examination and application of management and marketing communication knowledge within the domain of visual communication design.*
☐	10.	Mampu mengkaji dan mengaplikasikan ilmu riset desain untuk menghasilkan karya desain komunikasi visual yang komprehensif *Proficient in the exploration and application of design research knowledge to generate comprehensive visual communication design projects.*
☐	11.	Mampu mengkaji dan mengaplikasikan teknologi dan inovasi dalam desain komunikasi visual *Competent in the examination and application of technology and innovation within the context of visual communication design.*

Kode	Deskripsi CPMK	Pemetaan CPMK ke CPL		Bobot CPMK
		CPL 3	CPL 4	
CPMK-1	Mahasiswa mampu mengidentifikasi dan mengoperasikan perangkat lunak yang sesuai untuk pemodelan objek 3 dimensi *Students are able to identify and operate appropriate software for modeling 3-dimensional objects*	☐	☑	20%
CPMK-2	Mahasiswa mampu merancang karakter animasi sesuai dengan prinsip animasi *Students are able to design animated characters according to animation principles*	☑	☐	15%
CPMK-3	Mahasiswa mampu merancang rigging pada wajah dan tubuh karakter animasi *Students are able to design rigging on the faces and bodies of animated characters*	☑	☐	15%
CPMK-4	Mahasiswa mampu melayout lingkungan virtual dengan memperhatikan empasis, komposisi, spasi, penekanan pada prinsip desain *Students are able to lay out a virtual environment by paying attention to composition, spacing, emphasis on design principles*	☐	☑	15%
CPMK-5	Mahasiswa mampu membuat animasi dan komposisi gerakan karakter dan lingkungannya *Students are able to create animations and compositions of character movements and their environment*	☐	☑	20%
CPMK-6	Mahasiswa mampu melakukan proses render video animasi *Students are able to perform the process of rendering animated videos*	☑	☐	15%
	Total Bobot	**50%**	**50%**	**100%**

CPL | CPMK | Rencana Asesmen & Evaluasi | Rencana Pembelajaran

Rencana Asesmen & Evaluasi

No.	Rencana Evaluasi	CPMK-1	CPMK-2	CPMK-3	CPMK-4	CPMK-5	CPMK-6	Total Bobot
1	Storyline dan Storyboard animasi *naskah animasi* Studi Kasus | *Case Method*	5%	3%	3%	3%	1%	0%	15%
2	pemodelan lingkungan animasi *objek lingkungan animasi* Studi Kasus | *Case Method*	5%	5%	5%	5%	5%	5%	30%
3	pemodelan karakter animasi *karakter animasi* Studi Kasus | *Case Method*	5%	5%	5%	5%	5%	5%	30%
4	video animasi *video animasi* Hasil proyek | *Team-based Project*	5%	2%	2%	2%	9%	5%	25%
	TOTAL *Target*	**20%** *20%*	**15%** *15%*	**15%** *15%*	**15%** *15%*	**20%** *20%*	**15%** *15%*	**100%** *100%*

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Name of Study Program	Visual Communication Design
Course Name	Animation
Code	DV184502
Semester	5
credits	4 / 6,4 ECTS
Lecturer	Didit Prasetyo

Study Materials	12 principles of animation; Modeling Object and Character, Rigging and Animation Process, Rendering and Editing Video	
Program Learning Outcome (PLO)	P. 1	draft theoretical about design (*Design Theory*) in a way general and at least one draft theorists design visual communication (*Ecological Theory, Constructivism, Semiotics, Gestalt Theory, Cognitive Theory, or Huxley - lester Model*) deep ;
	P.4	design methodology in depth;
	P.5	concepts , principles , methods , and techniques application color , composition (nirmana), design process , photography , and computers graphics ;
	P.7	knowledge factual raw material designl ;
	P.8	draft general , principles , and techniques communication effective ;
	P.9	knowledge factual about types and regulations broadcasting , journalism and Information and Transactions Electronics , developments technology cutting edge in the field design visual communication ; And
	KK. 3	capable do analysis to level efficiency utilization of materials and time in the production process every alternative prototype solution design selected visual communications , without change essence and aesthetics design and with still conserve environment ;
	KK. 4	capable communicate alternative prototype solution design visual communication _ independent or group in verbal , graphic , written and communicative forms with manual and digital techniques based on choice rule constant communication ; _ And
COURSE LEARNING OUTCOME (CLO)	M1	Students are able to identify and operate software suitable for modeling 3-dimensional objects.
	M2	Students are able to design animated characters according to animation principles
	M3	Students are able to design rigging on the faces and bodies of animated characters
	M4	Students are able to lay out virtual environments by paying attention to emphasis, composition, spacing, and emphasis on design principles
	M5	Students are able to create animations and compositions of character movements and their environments
	M6	Students are able to carry out the process of rendering animated videos

Week	**Lesson Learning Outcome (LLO)**	**Comprehensive Coverage of Learning Materials**	**Learning Methods**	**Estimated Time**	**Student Learning Experience**	**Criteria and Indicator Evaluation**	**Weight [%]**
1-3	Students are able to explain the 3-	3-dimensional asset modeling using the low	Face to face	TM = 384	Studying Discussion Practical assignments	Students are able to identify and operate software	10%

	Dimensional low poly asset modeling process	poly method, object materials				suitable for modeling 3-dimensional objects. **Assignment** : practical work for students to operate software to create 3-dimensional objects, assemble 3-dimensional objects and layout objects into a 3-dimensional space	
			Assistance	BT = 960			
			Self-Study	BM = 576			
4-6	Students are able to design 3-dimensional low poly character modeling	Modeling uses mirror, sub surface, material and character texturing modifiers	Face to face	TM = 384	Studying Discussion Practical assignments	Students are able to design animated characters according to animation principles, **Assignment** : practical work: students make character sketches in the form of manual drawings and continue with 3-dimensional digital modeling of the characters	20%
			Assistance	BT = 960			
			Self-Study	BM = 576			
7-9	Students are able to create 3-Dimensional character rigging	Skinning armature with surfaces, rigging expressions on the character's face, rigging movements on the character's body	Face to face	TM = 384	Studying Discussion Practical assignments	Students are able to design rigging on the faces and bodies of animated characters **Assignment** : practical work for students to create rigging for the character's face and body	20%
			Assistance	BT = 960			
			Self-Study	BM = 576			
10-11	Students are able to lay	Lighting, layout and	Face to face	TM = 256	Studying Discussion	Students are able to lay out	10%

	out staging for animation production	composition of background objects and camera movement			Practical assignments	virtual environments by paying attention to emphasis, composition, spacing, and emphasis on design principles **Assignment** : practical work for students to create virtual environment layout compositions	
			Assistance	BT = 640			
			Self-Study	BM = 384			
12-14	Able to create animations on 3 Dimensional characters and assets	Animation process, motion capture, inverse kinetic and forward kinetic, looping movement	Face to face	TM = 384	Studying Discussion Practical assignments	Students are able to create animations and compositions of character movements and their environments **Assignment** : student practicum creates animated character movements in their environment according to the story concept being discussed	20%
			assistance	BT = 960			
			Self-Study	BM = 576			
15-16	Able to render and carry out the process of changing animated videos	Video and sound editing	Face to face	TM = 256	Studying Discussion Practical assignments	Students are able to carry out the video rendering process **Assignment** : student practicum to render the animation that has been created and carry out the video editing process	20%
			Assistance	BT = 640			
			Self-Study	BM = 384			

REFERENCES

1. *Manrique, Michelangelo, "Blender for animation and Film Based Production", Paperback,CRC Press*
2. *Blain, John M, "The Complete Guide to Blender Graphics : Computer Modeling and Animation", Paperback, CRC Press*
3. *Hess, Rolan, "Blender Foundation: The essential guide to learning Blender 2.6" Focal Press Elsevier, 2010*
4. *Flavell, Lance, "Beginning Blender: Open source 3D modeling, animation and game design" Apress, 2010*
5. *James Chronister, "Blender Basic Classroom Tutorial Book 4th edition", 2011*
6. *Techniques for mastering Adobe Illustrator, Adobe Photoshop or Open Source Gimp*
7. *Technique for creating simple 3D objects using Blender or Sketcup*
8. *Photography processing techniques using Adobe Photoshop and Adobe Lightroom*
9. *Cinematography in the development of industry and the rules of recording art*
10. *Motion Capture technology as an alternative animation process*

Example Test Description

Course : Animation **Semester:** 5
Code: DV 184502 **Credits:** 4 sks/ 6.4 ECTS
Department : Visual Communication Design **Lecturer:** Didit Prasetyo

Learning Achievements:
Students have the ability to create lowpoly, 3D models of assets.

Example Question Description

1. Generate an isometric three-dimensional model from An excellent workspace for a specific vocation.
2. When modeling objects and rooms, please do observation and data collection in the following manner:
3. Capturing photographs of a certain profession's original workspace from various angles using a camera.
4. If it is challenging to capture a snapshot directly, secondary data can be utilized instead. Photograph obtained from reliable sources.
5. The concept of prioritization involves assigning importance to the object that represents a typical trait of a specific profession. For example, in the case of a doctor, the chair is a significant item to consider, but for an architect, the table holds symbolic value. Similarly, a singer's tool of the trade would be music.

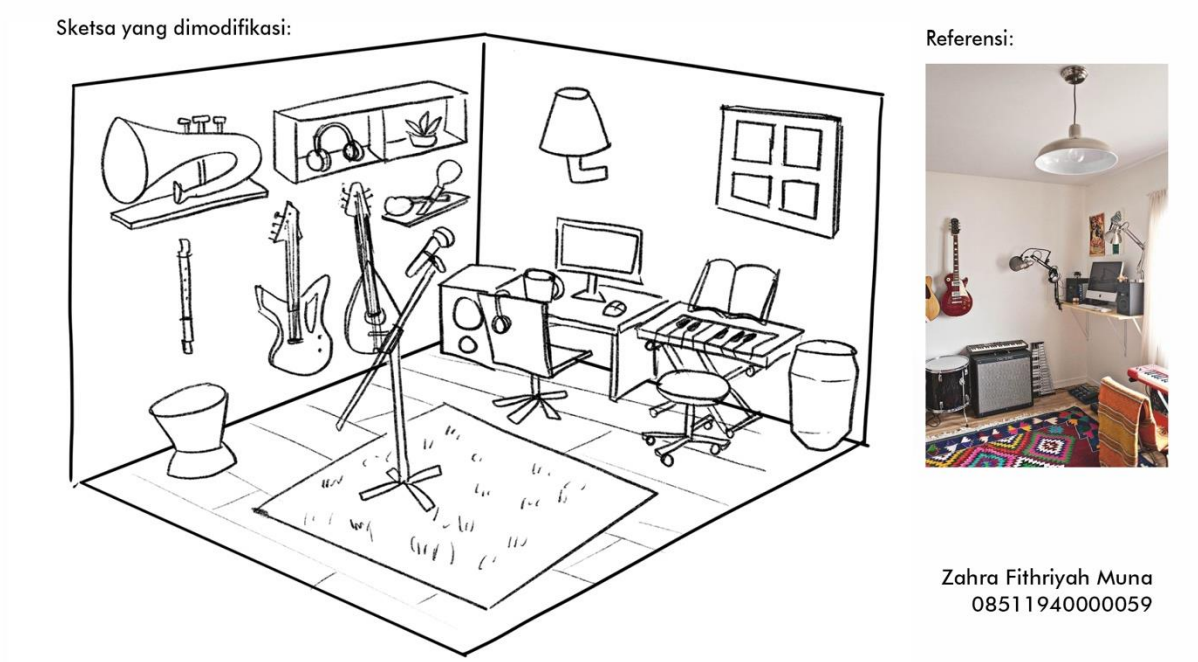
Format:

1. Task completed in an individual manner.
2. Quantity A minimum of 20 objects are modeled, each with a distinct form from the basis.
3. The collection includes a Blender file, a PNG rendering picture file with full HD resolution, and three different camera angles (perspective, macro, front view). Additionally, there are image files used as references for modeling.
4. Collection was conducted using My ITS classroom in accordance with the assigned duties indicated by the link titles.
5. Create a PowerPoint presentation consisting of work slides and explanation slides that cover the work and concept.

Example Answer :

1. The student attempts to carefully examine a space where work is being done by a professional in order to identify objects that are commonly associated with that profession.
2. The student attempts to make changes to the room and create a model based on an existent object shown in a reference photo.
3. The student should create models of at least 20 objects that are distinct from basic ones. For example, they could model books, chairs, tables, windows, frames, doors, light tables, walls with lights, book racks, carpets, window curtains, curtain rails, sofa chairs, and so on, until they have a minimum of 20 objects.
4. The student designs the room arrangement to enhance its aesthetic appeal by altering the color of objects and adjusting the size proportions of objects to make them more visually engaging.
5. The student controls the lighting in the room to create a more dramatic effect, using additional lighting effects such as spotlights and blazing lamps.
6. The student adjusts the camera's location until it is in the desired position. The optimal image frame can be achieved by following the directions and adjusting the position in at least three different ways.
7. The learner is creating a bespoke arrangement according to specific directions.

Students are expected to present their results in the correct format as instructed.
The student should upload the rendered files and Blender files as per the given guidelines.



Observations and sketches design room reference

Lowpoiy modeling results isometric looks front

Lowpoly modeling results isometric looks side

lowpoly modeling results looks on

Guidelines Scoring

Question :
Generate an isometric three-dimensional (3D) model of an ideal workspace in a single profession.

Indicators :
Student capable observe object typical from something context profession and convert results his observations into a 3D model with use method lowpoly

No	Component Evaluation	Score
1	Suitability object with example	30
2	Suitability with method lowpoly	30
3	Composition color and light	20
5	The uniqueness of the model and rendering according to the problem	20
	Total score	**100**