



Republic of Rwanda
Ministry of Education



RTB | RWANDA
TVET BOARD

MMP2D501

2D ANIMATION

Create 2D Animation

RQF Level: 5

Learning Hours



Credits: 10

Sector: ICT AND MULTIMEDIA

Trade: MULTIMEDIA PRODUCTION

Module Type: SPECIFIC

Curriculum: ICTMMP5001-TVET Level 5 in Multimedia Production

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Purpose statement	At the end of this 2D Animation module, participants will be proficient in developing/delivering 2D animations product , mastering animation techniques and animation composition. Through comprehensive instruction, trainees will develop the skills necessary to prepare characters for animation, animation sequences, animation dynamic effects, and perform advanced compositing tasks.					
Leaning assumed to be in place	MOTION GRAPHICS					
Delivery modality	Training delivery		100%	Assessment		Total 100%
	Theoretical content		30%	Formative assessment	30%	50%
	Practical work:		30%		70%	
	• Group project and presentation	30%				
	• Individual project /Work	40%				
			Summative Assessment			50%

Elements of Competency and Performance Criteria

Elements of competency	Performance criteria
1. Prepare for animation	1.1. storyboard is correctly interpreted according to the visual technical aspects
	1.2. Animation resources are properly prepared according to visual properties.
	1.3. 2D assets are properly prepared based on audio/visual appeal.
	1.4. Animatics are properly produced following their technical considerations
2. Animate a character	2.1. X sheets are perfectly set in accordance with animation objects.
	2.2. Poses are properly designed based on types of action.
	2.3. Keys are perfectly set based on animation principles.
	2.4. Facial expression poses are properly designed according to real life Execution
	2.5. Actions are perfectly synced with sounds based on Emotional impact
	2.6. The character is properly refined based on animation techniques.
3. Animate effects	3.1. Effects are properly defined according visual Emphasizes of their types.

	3.2. References are clearly interpreted based on their characteristics
	3.3. Effect layers are perfectly animated based on appropriate scenes.
	3.4. Refine based on appropriate animation technique
4. Perform compositing	4.1. Composition elements are properly collected based storytelling principles.
	4.2. Timeline is properly set according timing and precision
	4.3. Props are perfectly animated based on movement style.
	4.4. Background is properly animated according to appropriate storytelling techniques

Intended Knowledge, Skills and Attitude

Knowledge	Skills	Attitude
✓ Describe 2d animation workflow ✓ Explanations on color pallet and theory ✓ Describe anatomy and forms ✓ Explain 2d animation software ✓ Explain physics movement ✓ Describe filmmaking techniques ✓ Describe art elements ✓ Identify art principles ✓ Explain the principles of design ✓ Describe the principles of animation ✓ Describe video editing ✓ Describe color theory and management	✓ Interpret Script ✓ Interpret storyboard ✓ Create Storyboard ✓ Create perspectives and environment drawing ✓ Design Character poses rigging ✓ Tell story using visual tools ✓ Narrate the story. ✓ Create key frames and tweens ✓ Animate Background ✓ Operate camera ✓ Communicate effectively ✓ Solve Problems ✓ Perform Typing ✓ Collaborate with stakeholders	✓ A genuine love for animation and a desire to bring stories and characters to life. ✓ Patience for handling revisions and staying focused during long hours. ✓ Being receptive to feedback and willing to adapt ideas based on directorial vision or story needs. ✓ Punctuality, effective communication, self-conduct with integrity, and respect. ✓ Keen eye for ensuring high-quality animation in terms of visual appeal, timing, and believability. ✓ Willingness to learn new software, techniques, and styles keeps you adaptable. ✓ Balancing multiple tasks, meeting deadlines, and prioritizing effectively.

✓ Explain acting and body languages		✓ Overcoming frustration to provide solutions for complex technical challenges in design and animation. ✓ Ability to generate new ideas and solutions, constantly seeking improvement in design and animation craft. ✓ ✓ Optimism, competitiveness, learning from failures, and determination in achieving career goals. ✓ Attention to cultural sensitivity and social responsibility.
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Course content

Learning outcomes	At the end of the module the learner will be able to: 1. Prepare for animation 2. Animate a character 3. Animate effects 4. Perform compositing
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Learning outcome 1: Prepare for animation	Learning hours: 20
Indicative content	
• Interpretation of storyboard ✓ Layout ✚ Panels of scenes ✚ Composition ✚ Camera angles ✓ Action ✚ Character poses ✚ Background ✚ Dialogue and Narration ✓ Details ✚ Notes and descriptions	

Shot Length and pacing

- Preparation of Animation Resources
 - ✓ Light and Color
 - ✓ Shape and form
 - ✓ Value and Contrast
 - ✓ Space and Perspective
- Preparation of 2D Assets
 - ✓ Character design
 - ✓ Color palettes
 - ✓ Art style
 - ✓ Background Design
- Production of Animatics
 - ✓ Storyboard integration
 -  Importing frame
 -  Time sequences
 - ✓ Pose-to-pose
 -  Capturing character actions
 -  Capturing expressions
 - ✓ Time and frame management
 -  Time shots
 -  Scene transitions
 -  Audio elements

Resources required for the indicative content

Equipment	High-performance computer, Monitor, drawing tablet, Drawing board, Light table/ light desk, Printer, Scanner, Camera, Microphone, External backup and Tripods
Materials	Software License, Paper, Pen, Pencils, Brushes, Ink, Paint, Water colours, Markers, Pastels , Eraser, Masking tape, Printing and scanning materials, Cleaning cloths and Memory card reader
Tools	Animation software(s), Drawing software(s), Video editing software(s), Rulers , Bag packs and Mirror
Facilitation techniques	Brainstorming and practical exercises • Brainstorming 1. Trainer help trainee to form small group

	- Trainer asks trainee to discuss about visual technical aspects of story board, preparation of animatic resources and 2D assets. - Trainer supervises discussion and provide support where it is needed - Trainee present their work - The trainer wraps up with question-and-answer session. Practical exercises on making concept - Trainer asks each trainee produces animatics - Trainer checks if the environmental, social, health and safety plans were followed/implemented by Trainees while producing animatics. - Trainer provides inputs and clarification / answer any questions they might have.
Formative assessment methods	- Written based assessment - Oral Presentation - Performance assessment

Learning outcome 2: Animate a character	Learning hours: 25
Indicative content	
Setting up X sheets ✓ Layout ✓ Character objects ✓ Special objects ✓ Background element ✓ Transitions Designing poses ✓ Primary actions  Jumping  Walking  Talking  Gesturing ✓ Facial expressions  Eye movement	

✚ **Lip Sync instead of smiling**

✚ Frowning

✚ blinking

✓ Gestures and poses

✚ Nonverbal actions (Waving, thumbs up and blinking)

✓ In between

- **Setting up Keys**

- ✓ Squash and stretch

- ✓ Anticipation

- ✓ Staging

- ✓ Straight ahead action

- ✓ Pose-to-pose

- ✓ Overlapping action

- ✓ Slow in and slow out

- **Designing Facial expression poses**

- ✓ Exaggeration

- ✓ Squash and stretch

- ✓ Appeal

- ✓ Eye movement

- **Synchronization of Actions**

- ✓ Clarity and readability

- ✓ Intensity and exaggeration

- ✓ Timing and spacing

- **Refining character**

- ✓ Traditional hand-drawn animation

- ✓ Limited Animation

- ✓ Cut out Animation

- ✓ Cel Animation

- ✓ Rotoscoping

- ✓ Digital animation

- ✓ Motion Graphics
- ✓ Partial animation
- ✓ Frame by Frame animation
- ✓ Looping

Resources required for the indicative content

Equipment	High-performance computer, Monitor, drawing tablet, Drawing board, Light table/ light desk, External backup
Materials	Software License, Paper, Pen, Pencils, Brushes, Ink, Paint, Water colours, Memory card reader
Tools	Animation software(s), Drawing software(s), Video editing software(s), Peg bars, Rulers , Bag packs and Mirror
Facilitation techniques	• Trainer Guide 4. Trainer demonstrates steps on setting up X sheets, designing poses and keys 5. Trainer asks each trainee to repeat those steps accordingly. 6. Trainees ask for clarification if any. • Video tutorial 1. Trainer Project/display video tutorial on Designing Facial expression poses and Synchronization of Actions 2. Trainee watch the tutorial and repeat all steps from video tutorial. 3. Trainer supervises all activities and give clarification if any. • Practical exercises on refining character. 1. Trainer asks each trainee to refine given character. 2. Trainer ask trainees to consider the environmental, social, health and safety plans were followed/implemented by Trainees while refining a character. 3. Trainer provides inputs and clarification / answer any questions they might have. 4. Trainer assesses all trainee's work and provides them with feedbacks
Formative assessment methods	•Written based assessment •Oral Presentation •Performance assessment

Learning outcome 3: Animate effects		Learning hours: 25
Indicative content		
- Defining effects ✓ Particles effects ✓ Environmental effects ✓ Magic and fantasy effects ✓ Impact and action effects ✓ Transition effects - Interpretation references ✓ Variety of views  Side view  Front view  Perspective View ✓ Dynamic and Fluid Motion ✓ Detail and Clarity - Animation of effect layers ✓ Explosion effects ✓ Smoke and fog ✓ Fire and Flames ✓ Water and fluids dynamics ✓ Weather effects ✓ Lighting and glow effects - Refining effects ✓ Observation and reference ✓ Detailing and Texturing ✓ Color and lighting ✓ Motion and dynamics		
Resources required for the indicative content		
Equipment	High-performance computer, Monitor, drawing tablet, External backup	

Materials	Software License, Paper, Pen, Pencils, Brushes, Ink, Paint, Water colours, Memory card reader
Tools	Animation software(s), Drawing software(s), Video editing software(s)
Facilitation techniques	• Brainstorming 5. Trainer help trainee to form small group 6. Trainer asks trainee to brainstorm on Definition of effects and interpretation of references. 7. Trainer supervises discussion and provide support where it is needed 8. Trainee present their work 9. Trainer provides expert view for recovering gaps in trainees understanding 10. The trainer wraps up with question-and-answer session. • Trainer Guide 1. Trainer demonstrates steps on animating effects 2. Trainer asks trainee to repeat those steps accordingly. 3. Trainees ask for clarification if any. • Practical exercises on refining effects. 1. Trainer asks trainees to refine given character. 2. Trainer checks if the environmental, social, health and safety plans were followed/implemented by Trainees while refining effects. 3. Trainer provides inputs and clarification / answer any questions they might have. 4. Trainer assesses all trainee's work and provides them with feedbacks
Formative assessment methods	• Written based assessment • Oral Presentation • Performance assessment • Product assessment

Learning outcome 4: Perform compositing

Learning hours: 30

Indicative content	
• Collection of composition elements ✓ Scale and proportion ✓ Composition flow ✓ Depth and layering ✓ Point of view • Setting up timeline ✓ Keyframes ✓ Ease in and ease out ✓ Audio sync and lip sync • Animation of props ✓ Functional Props ✓ Decorative Pros ✓ Symbolic props ✓ Environmental props • Animation of background ✓ Layered backgrounds ✓ Looping backgrounds ✓ Foreground, Middle ground and background interaction	
Resources required for the indicative content	
Equipment	High-performance computer, Monitor
Materials	Software License and Memory card reader
Tools	Animation software(s), Drawing software(s), Video editing software(s)
Facilitation techniques	• Brainstorming 1. Trainer help trainee to form small group 2. Trainer asks trainee to make a discussion on composition element. 3. Trainer supervises discussion and provide support where it is needed 4. Trainee present their work 5. Trainer provides expert view for recovering gaps in trainees understanding 6. The trainer wraps up with question-and-answer session. • Video tutorial

	1. Trainer Project/display video tutorial of Setting up timeline according to timing and precision. 2. Trainee watch the tutorial and repeat all steps from video tutorial. 3. Trainer supervises all activities and give clarification if any. • Trainer Guide 5. Trainer demonstrates all steps needed to animate props and background. 6. Trainer asks trainee to repeat those steps accordingly. 7. Trainees ask for clarification if any.
Formative assessment methods	• Written based assessment • Oral Presentation • Performance assessment • Product assessment

Integrated/Summative assessment (For specific module)

Integrated situation

The BRIGHT IMAGE is a 2D animation company specialized in making 2D animation film like the thousand hills, the big man and many more. This Year they want to attend international cartoon festival for their first time but their lacking a skilled 2D animator. They want to make a 2D animation named “a day at village”. As a competent 2D animator artist they want you to create 1 minute animation to be screened in the festival. 2D animation assets like background, props and character are given, Script and storyboard to follow is also available at BRIGHT IMAGE.

Instruction:

1. Animation must be 1 minute
2. Export MP4 video
3. Animation must have HD resolution of 1920*1080, RGB color
4. Task must be done in 8 hours

Resources

Tools	Animation software(s), Drawing software(s), Video editing software(s)
Equipment	High-performance computer, Monitor
Materials/ Consumables	Software License, Paper, Pen, Pencils, Brushes, Ink, Paint, Water colours, Memory card reader

Assessable outcomes	Assessment criteria (Based on performance criteria)	Indicator	Observation		Marks allocation
			Yes	No	
Learning outcome 1:	1.1. Storyboard is interpreted	Layout is interpreted			1
		Actions are prepared			1

Prepare for animation (10%)		Details are interpreted			1
	1.2 Animation resources are prepared	Light and Color are prepared			1
		Shape and form are available			1
	1.3 2D assets are prepared	Character designs are prepared			1
		Background designs are prepared			1
	1.4 Animatics are produced	Frames are imported			1
		Character actions are captured			1
		Time and frames are managed			1
Learning outcome 2: Animate a character (30%)	2.1. X sheets are set	Layout out			2
		Character objects			2
		Transitions			2
	2.2. Pose are Designed	Primary actions			3
		Facial expressions			3
		Gestures and pose			2
		In between			2
	2.3. Keys are set	Appropriate Animation principles are applied			4
	2.4. Actions are synchronized	Actions are clear and readable			2
		Intensity and exaggeration are used			2
		Timing and spacing are vibrant			2
	2.5. Character refined	Animation techniques are used			4
Learning outcome 3: Animate effects (30%)	3.1 Effects are defined	Particles effects			3
		Environmental effects			3
		Magic and fantasy effects			3
		Impact and action effects			3

		Impact and action effects			3
	3.2. References are interpreted	Different views are shown			2
		References are dynamic and fluid motion			2
	3.3. Effects Layers are animated	Appropriate effect layers are animated			3
	3.4. Effects are refined	Details and texture			3
		Color and effects			3
		Motion and dynamics			2
Learning outcome 4: Perform compositing (30%)	4.1 Composition element are collected	Scale and proportion			2
		Composition flow			2
		Depth and layering			2
		Point of view			2
	4.2. Timeline is set	Keyframes			2
		Ease in and ease out			2
		Audio sync and lip sync			3
	4.3. Props are animated	Functional Props			2
		Decorative Pros			2
		Symbolic props			2
		Environmental props			2
	4.3. Backgrounds are animated	Layered backgrounds			2
		Looping backgrounds			2
		Foreground and background are interacted			3
Total marks					
Percentage Weightage		100/100%			

Minimum Passing line % (Aggregate): 70%

(Williams, 2021)

(Stanchfield, 2023)

(Hart, 2021)

(Ollie Johnston, 1995)

(Blair, 2020)

(Williams, 2021)

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