

MODEL 3D CHARACTERS

UNIT CODE: ME/OS/AN/CR/07/5/MA

UNIT DESCRIPTION

This unit specifies the competencies required to model 3D characters. It involves analysing character bible, developing animation theme, preparing character T or A poses, unwrapping 3D characters and texturing 3D characters.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. <i>Bold and italicized terms are elaborated in the range.</i>
1. Analyze character bible	1.1 Animation script and character profile is analysed. 1.2 Animation theme and style is determined. 1.3 Level of detail for a character model animation is established as per the SOPs.
2. Develop animation theme	2.1 Modelling technique is selected as per SOPs. 2.2 <i>Digital modelling software</i> is selected as per SOPs. 2.3 Colour schemes are selected. 2.4 Methods of character costume design are selected. 2.5 3D rig method is selected.
3. Prepare character T poses	3.1 Character T or A poses are digitized as per SOPs. 3.2 Character front view is prepared. 3.3 Character side view is prepared. 3.4 Character back view is prepared. 3.5 Character top view is prepared. 3.6 Character T or A poses are imported to 3D software.
4. Model 3D character	4.1 3D character T or A poses are aligned 4.2 Mesh model is formed in line with character blue prints. 4.3 Mesh model is selected using quadrilaterals. 4.4 <i>Facial loops</i> are developed. 4.5 <i>Body joint loops</i> are developed as per the SOPs. 4.6 <i>Select body</i> parts are modelled. 4.7 Character costumes and accessories are created

	4.8 Mesh model is refined as per character blue prints.
5. Unwrap 3D characters	<p>5.1 Character UV maps are prepared based on character requirements.</p> <p>5.2 Character UV maps are exported to <i>image editing software</i>.</p> <p>5.3 <i>Character texture details</i> are added to Character UV maps.</p> <p>5.4 Textured character UV maps are mapped into 3D character.</p>
6. Texture 3D character	<p>6.1 Bump maps are added based on character design.</p> <p>6.2 Hair and fur are added based on character design</p> <p>6.3 Eye materials are added based on character design</p> <p>6.4 Tongue materials and maps are added based on character design.</p> <p>6.5 Teeth materials are added based on character design</p>

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

Variable	Range
1. Digital modelling software includes but not limited to:	<ul style="list-style-type: none"> • 3Ds Max • Maya • Blender • Cinema 4D
2. Facial loops include but not limited to:	<ul style="list-style-type: none"> • eye loops • nose loops • cheek loops • mouth loops
3. Body joint loops include but are not limited to	<ul style="list-style-type: none"> • Neck • Shoulder • Elbow • Wrist • Fingers

	<ul style="list-style-type: none"> • Hip • Knee • Ankle
4. Select body includes and is not limited to:	<ul style="list-style-type: none"> • Eyes • Mouth • Ears
5. Image editing software includes and is not limited to	<ul style="list-style-type: none"> • Photoshop • Light room
6. Character texture details includes and is not limited to	<ul style="list-style-type: none"> • Pores • Wrinkles • Scars • Belt • Fabric

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required skills

The individual needs to demonstrate the following skills:

- Modelling
- Texturing
- Digital painting

Required knowledge

The individual needs to demonstrate knowledge of:

- 3D Modelling software
- 3D Modelling techniques
- Image editing software
- Image editing techniques

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> 1.1 Analysed character bible 1.2 Developed animation theme
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	<p>1.3 Demonstrated the ability to prepare character T or A poses.</p> <p>1.4 Demonstrated the ability to model 3D character</p> <p>1.5 Demonstrated the ability to unwrap 3D characters</p> <p>1.6 Demonstrated the ability to texture 3D character</p>
2. 2. Resource Implications	<p>The following resources must be provided:</p> <p>2.1 Character reference materials</p>
3. Methods of Assessment	<p>Competency may be accessed through:</p> <p>3.1 Written tests</p> <p>3.2 Observation</p> <p>3.3 Oral questions</p> <p>3.4 Third party report</p> <p>3.5 Interviewing</p> <p>3.6 Project and report writing</p>
4. Context of Assessment	<p>Competency may be assessed:</p> <p>4.1 On the job</p> <p>4.2 Off the job</p> <p>4.3 Off the job assessment must be undertaken in a closely simulated workplace environment.</p>
5. Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job roles is recommended.</p>