

**SKILLS FRAMEWORK FOR MEDIA
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Visual Graphics					
TSC Title	3D Modelling					
TSC Description	Create 3D models for characters, objects or environmental elements to meet production requirements for visual effects, films or game animations					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		MED-MPN-2057-1.1	MED-MPN-3057-1.1	MED-MPN-4057-1.1	MED-MPN-5057-1.1	
		Create simple 3D models based on concepts and research to meet production requirements	Develop and optimise complex 3D models to meet the production requirements	Lead the development and optimisation of 3D models to achieve the creative and technical goals of production	Establish guidelines, identify technologies and drive the development of 3D models to achieve the creative and technical goals of the production	
Knowledge		<ul style="list-style-type: none"> • Illustrations and drawing techniques • Use of digital 3D modelling tools • Principles and techniques of digital animation, texturing and digital sculpting • Principles and concepts of polygonal modelling • Concepts of polygonal budget • Impact of low poly vs high poly models • Understanding of physical shapes and forms • Shape and form of natural objects and • Techniques for implementing real-world shapes through 3D models • Visual reference materials • Organisation's creative guidelines and style guides 	<ul style="list-style-type: none"> • Illustration and drawing techniques • Use of digital 3D modelling tools • Anatomy models and types of muscular and skeletal structures and their impact on motion • Fundamental principles of architecture and interior design • Principles and concepts of skeletal rigging and impact of models on skeletal rigging • Fundamentals of 3D animation • Visual reference materials • Effects of camera positions, angles, lens types and lighting in relation to objects and environments • Assets optimisation techniques and methods 	<ul style="list-style-type: none"> • Creative vision of the production • Creative and technical goals of 3D modelling for the project • Concept art • Processes involved in creating 3D animation • Asset pipelines and production workflows • Technologies and approaches used in 3D modelling • Assets optimisation techniques and methods • Rendering process and impact of models on rendering efficiency 	<ul style="list-style-type: none"> • Creative vision of the production • Industry standards and upcoming technologies and approaches in 3D modelling • Asset pipelines and production workflows • Tools required to implement asset pipelines • Rendering process and impact of models on rendering efficiency • Capabilities and limitations of pipelines and toolsets 	
Abilities		<ul style="list-style-type: none"> • Conduct research to understand the concept 	<ul style="list-style-type: none"> • Analyse creative briefs, scripts, visual references 	<ul style="list-style-type: none"> • Analyse concept art, scripts and creative and 	<ul style="list-style-type: none"> • Establish creative guidelines, style guides 	

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		<p>and obtain ideas and visual references for the 3D models to be created</p> <ul style="list-style-type: none"> • Create simple 3D models for environment, inanimate objects and characters requiring lesser amounts of rigging and animation • Refine 3D models iteratively to achieve the artistic vision and production requirements • Store files to enable the next stage of production to run efficiently 	<p>and technical and production parameters to determine the modelling requirements</p> <ul style="list-style-type: none"> • Analyse the polygon budget to determine technical approaches to be taken for developing 3D models • Liaise with concept artists to modify concept art to meet the needs of the character models and animation • Develop prototypes for complex character models to be finalised for production • Create complex 3D models for key characters requiring complex rigging, surfacing and animation • Present 3D models for review to the relevant stakeholders • Refine 3D models through iterative review to meet the needs of the production • Optimise 3D models to enhance the efficiency of the asset pipelines and the rendering process 	<p>technical goals of the production to understand the 3D modelling requirements</p> <ul style="list-style-type: none"> • Provide feedback to the art team for refinement of concept art to meet the needs of modelling and animation • Develop creative briefs to communicate the 3D modelling requirements to the team • Oversee the creation of 3D models to meet production requirements • Review 3D models for the achievement of the creative and technical goals pertaining to the artistic direction, animation requirements and rendering efficiency • Guide the refinement of the 3D models to meet specific creative requirements • Identify the scope of optimisation required in 3D models based on feedback from the rendering process • Oversee the optimisation of 3D models to ensure the achievement of the creative vision as well as the technical efficiency required 	<p>and colour palettes to drive the development of all animation and visual effects processes</p> <ul style="list-style-type: none"> • Drive research to review proofs-of-concept for the selection of new technology for 3D modelling • Determine technologies to be used for creating 3D models based on the creative and technical goals of the production • Drive the creation of custom tools to meet the pipeline requirements for modelling • Review 3D models for alignment with the artistic direction of production 	
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