<Student Name> <Student ID>

Date

# Modelling

|  |  |
| --- | --- |
| Polygonal Modelling | |
| Used where | For the main 3D objects in the scene, such as environment structures, props, and character bodies. |
| Purpose | To create detailed, realistic shapes with control over geometry. |
| Part of labs? | Yes. |
| Related module content | 3D asset creation, topology management, UV unwrapping. |
| Advantages | High control over shapes, easy to edit, widely supported in all 3D software. |
| Disadvantages | Can be time-consuming; requires manual optimization for performance. |
| Alternatives | Sculpting for organic forms, procedural generation for repetitive objects. |

|  |  |
| --- | --- |
| Procedural Modelling | |
| Used where | For repeating elements such as terrain, foliage placement, or patterned objects. |
| Purpose | To generate complex assets automatically using modifiers or procedural tools. |
| Part of labs? | Yes. |
| Related module content | Geometry nodes (Blender) or procedural generators (Houdini). |
| Advantages | Saves time, flexible adjustments, non-destructive workflow. |
| Disadvantages | Less direct control over exact shape details. |
| Alternatives | Manual modelling, kitbashing. |

# Animation

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| --- | --- |
| <Name of animation technique 1> | |
| Used where | For repeating elements such as terrain, foliage placement, or patterned objects. For organic forms like rocks, natural shapes, or creature detailing. For character movements, object transforms, and scene actions. For natural effects like falling debris, collision-based motion. For effects such as sparks, magical energy flows. |
| Purpose | To generate complex assets automatically using modifiers or procedural tools. Sculpting To achieve realistic organic shapes with fine surface detail. Animation Keyframe Animation To control motion manually for precise timing. Physics Simulation To simulate realistic physical behavior automatically. Particle Systems To create dynamic visual effects. |
| Part of labs? | Yes. Yes. Yes. Yes Yes. |
| Related module content | Geometry nodes (Blender) or procedural generators (Houdini). Digital sculpting techniques, multiresolution workflows. Animation curves, interpolation, motion planning. Rigid body dynamics, cloth simulation, particle simulation. Emitter particles, volumetric rendering. |
| Advantages | Saves time, flexible adjustments, non-destructive workflow. Great for realism, artistic freedom. Full control over motion, works well for stylized or planned actions. Realistic results with less manual animation. Creates complex effects quickly, can simulate natural randomness. |
| Disadvantages | Less direct control over exact shape details. High-poly output, needs retopology for animation. Time-consuming, less natural if not done carefully. Can be computationally heavy, less artistic control. High render times, complex to optimize. |
| Alternatives | Manual modelling, kitbashing. Displacement maps, texture-based normal details. Motion capture for realistic movement. Manual animation for stylized control. Sprite-based effects, baked simulations. |

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| --- | --- |
| <Name of animation technique n> | |
| Used where |  |
| Purpose |  |
| Part of labs? | <yes/no? |
| Related module content |  |
| Advantages |  |
| Disadvantages |  |
| Alternatives |  |

## 3rd party Assets used in the coursework

Note: You are ***not allowed*** to import any animation, models, or model parts from external

sources.

3rd party resources that explicitly permitted are:

* Music and sound effects
* Textures
* Reference images

Textures: Possibly from free libraries such as CC0 Textures, Texture Haven, or Quixel (permitted).

Music and Sound Effects: Background soundtrack and ambient sound from royalty-free sources.

Reference Images: Used for modelling accuracy.

Note: No imported models or animation clips.