



UNIVERSITY OF
LINCOLN

**Department of Computing & Informatics
Assessment Package Briefing Document**

**Title: CGP3001/CGP3003
Content Creation / Content Creation and
Management**

**Indicative Weighting:
Content Creation: 100%
Content Creation and Management : 60%**

Learning Outcomes:

On successful completion of this assessment package a student will have demonstrated competence in the following areas:

- [LO1] evaluate and employ appropriate software development tools for content creation;
- [LO2] formulate an asset portfolio to a specified brief;
- [LO3] appraise the role of content creation within a game development cycle.

Project Brief: Character creation, texturing, rigging and animation.

Create a biped with a strong emphasis on modelling, body and facial rigging/vertex weighting and texturing.

- You are required to design and build an animation ready biped using 3D software of your choice.
- Design and create a body rig with or without IK.
- Create a facial rig to drive facial expressions on the model without the aid of morph targets.
- Understand and employ proper and appropriate vertex weightings
- Texture the model as seamlessly as possible
- Create simple animated rendered sequences of completed character

The assessment is split into two parts: design and implementation.

Section A.

1. Design a biped that is human

Limitations and constraints:

- Must be to reasonable human proportions
- No wings or horns
- No usage of 'old' models, this design is from scratch
- Must have polygonal hair, length of your choice
- Must be clothed in skin tight wares or naked (no genitalia please)
- Must have fingers and thumbs and toes (the toes can be fused)
- Must have animatable mouth that has an inside, with teeth (no tongue necessary)
- Must have eyes that rotate in their orbits and eyelids that blink
- Ears are optional depending on hair design
- No Morph targets for geometry deformation

The character design must be expressed diagrammatically showing; front, back and side views with accompanying notes. Also show the same views of the head but enlarged for clarity. The diagram must show considerations for major joint deformation e.g. shoulders, elbows, knees, buttocks etc.

2. Design a rig for the biped which is represented as an overlay on the body diagram, including the enlarged facial rig views.

3. Display as an overlay, the colour scheme of the texture design of the character.

This section should be presented in a workshop session for comment and feedback by the tutor by week A11 (W/C 01/12/08).

Section B

1. Build the character and follow the design as closely as possible

The poly count for the model should be no more than 3k triangles

2. Build the rig for the character

- Use appropriate amount of bones and IK(optional, but will affect marking)
- Test the rig on the character ensuring that that the geometry moves in a satisfactory way

Evidence of rig testing is required. Use simple view port rendered animations of test stages e.g.

- Stage 1 of arms and legs
- Stage 2 of fingers
- Stage 3 of facial rig

Just one animation per stage may be sufficient but more is permissible.

Try to show as much testing as possible. eg.

- If some vertices are not showing, that they animate well and require editing
- It is allowable to leave it in the animation, and show another animation with the problem area fixed.
- Screen grabs that show highlighted trouble areas are required with notes on problem descriptions and possible fixes.

A description of how many iterations of the model and changes will be necessary.

3. Texturing the character

- UV the geometry and apply the texturing as required
- Create diffuse textures using up to 3 texture sets of 1024 each
- Bump, specular, alpha and normal maps etc are optional. Their usage and deployment will affect the marks.
- Photographs used in texturing must be show use of editing

4. Animate the character in rendered sequences

To exhibit the level of understanding and standard of modelling, and rigging that has been achieved there will be 6 animations required:

1. Finger and wrist articulation and rotations
2. Shoulder rotations taken to as extreme as possible, reflecting human joint movement
3. Torso twists and flexions (bending back and forth)

4. Crouches (to show knee bends and geometry flexions in buttock area buttock), leg extensions; front back and sides and ankle rotations
5. Neck rotations
6. Extensive facial expressions, eye rotations/blinking and jaw movement

No lighting is required, but if used, will not affect marking.

This assessment will present you with an opportunity to refine and develop your modelling skills that you learnt in semester A. It will also introduce you to the challenge of modelling an organic form, adding clothing / hair and rigging the model for animating. The camera can also be animated to add effect to your animated movie.

The lectures and seminars for this unit will discuss and analyse solutions to this assessment and will provide you with the technical and creative support to this problem.

Hand In Instructions

Submission for this assignment is through the Blackboard online submission system.

You should ensure that all of your model and animation files, resources and assets are correctly archived and zipped using a suitable file compression method. Please include movie files showing the required animations (MPEG, AVI, Quicktime formats only).

A design and production log should illustrate the processes and methods which you have used to design, construct and animated the model.

DO NOT include this briefing document with your submission.