



Department of Art and Design
BFA in Art with Animation Concentration

AR-387: 3-D Character Rigging and Animation
Spring 2015

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Website: bluehawk.monmouth.edu/~wkoning/instruct/
Blog / Digital Workbook: animonmouth.blogspot.com

Main Project: Animated Character/Creature
Assignment Description

This semester long project, with several assessment points along the way

Description from Syllabus

You will design, model, rig and animate a character or creature. It needs to have at least two limbs or moving appendages (tentacles, etc).

- **Phase 1 - Design & Modeling**
 - Creating a 3D mesh based on a design on paper
- **Phase 2 - Color /Texture**
 - Adding color and texture, resulting in a turntable animation of the static model
- **Phase 3 - Rigging**
 - Creating a rig for your Character/Creature, creating an animation test
- **Phase 4 / Final - Animation**
 - Animate your character/creature to navigate or wrestle with an obstacle. The animation should be 30 seconds long (with a maximum length of 1 minute) and fully lit, shaded and rendered to look like a professional piece, something you would want early in your demo reel.

Details for each phase will be posted on eCampus¹.

¹ eCampus is our LMS (Desire2Learn)

Character / Creature project

Phase 1: Model

Create a polygonal model for the Character/Creature you want to animate for this class.

- The design should be original
 - No existing super heroes, monsters, cartoon or anime characters
- The creature needs to have at least two limbs or moving appendages
 - It should have a way of propelling/moving itself other than sliding
- You may use the head you modeled from AR 386 if it fits your character/creature

Pay attention to the topography while modeling

- Create appropriate edge loops to ensure good deformations
- Do not make the geometry too dense (detailed)
 - Add enough detail in areas where a lot of deformation is expected
- Do not combine meshes unless you want to seamlessly connect them
 - Hiding seams is often more effective than actually connecting parts

Deliverables

- The completed Maya scene

Phase 2: Color / Texture

Take the complete model you created for **Phase 1: Model**

- Add color and texture
 - Think about the material properties and what appropriate diffuse, specular and roughness/glossiness values are for that material
 - Add bump for detail where needed
- Light the model using a three point light setup
- Create a turntable animation
 - Animate the (static) model rotating
 - 360 degrees at constant speed
 - 120 frames @ 24 fps (5 seconds)
 - Set up a camera
- Render at production quality @ 720p
 - No global illumination please
 - Adding an ambient occlusion pass is fine

Hand in:

- The H264 compressed Quicktime movie
- The Maya Scene
- A zip file containing the image files that you use on your model from your sourceimages folder

Phase 3: Rigging

Rig your Character / Creature you are creating, meaning

- Add joints, create a skeleton where appropriate
- Bind the mesh to the skeleton
- Adjust the skin weights for optimal deformations (weight painting)
- For parts that are to be animated using hierarchical animation, place all the pivots correctly and use correct parenting / constraining
- Set up controls for your rig (including the parts that are to be animated using hierarchical animation)
- Name all your nodes!
- Make sure the scene looks clean and organized in the outliner

Put your character into motion

- Try to go for some of the more extreme motions from your animation^{*}, that is a good way to find out whether a model is capable of performing the required actions.
- A walk cycle is also an option, if your animation^{*} asks for one.

Render a short sequence

- Use simple three point lighting
- Create a floor plane but no fancy environment, the focus is on the motion and deformations of your character / creature
- Should be 5-10 seconds

Deliverables

- Movie - 720p @ 24fps , H264 compressed (.mov or .mp4)
 - filename format: **Yourfirstname_AnimTest.ext** (f.i. Wobbe_AnimTest.mp4)
- Maya scene used to render movie
 - filename format: **Yourfirstname_AnimTest.###.mb** (f.i. Wobbe_AnimTest.027.mb)

^{*}What animation? The one you will be creating as the final phase of this project. You will start developing ideas for that ASAP!

Phase 4 / Final Animation

Animate your character/creature to (try to) overcome and obstacle

- Create a simple scene / backdrop
 - At the bare minimum there should be a floor plane. If your character creature does not live on the floor there should still be some point of reference like a tower or a tree
- Create an obstacle
 - This may be simply something blocking the way to a goal
 - E.g. your character tries to answer nature's call but the door is stuck
 - It can be a goal that does not cooperate
 - E.g. your character finds a pot of gold that is too heavy to lift and she does not have pockets to put the gold in
 - More metaphorically, a flaw in your character block your character to reach her or his goal
 - E.g. your hungry character wants to get to the food that is on a top shelf high above him and something in his past has made him afraid of heights
- Animate your character / creature navigating or wrestling with the obstacle.
 - The animation should be 30 seconds long (with a maximum length of 1 minute)
- Light, shade and render the animated sequence to look like a professional piece, something you would want early in your demo reel.
- You are encouraged to add a title and credits to your animation. This will be in addition to the 30 seconds animation.
- Sound is optional

Deliverables

- Movie - 720p @ 24fps , H264 compressed (.mov or .mp4)
 - filename format: **Yourfirstname_AR387Final.ext** (e.g. Wobbe_AR387Final.mp4)
- Maya scene used to render movie
 - filename format: **Yourfirstname_AR387Final.###.mb** (e.g. Wobbe_AR387Final.123.mb)