



Project  
**3D Digital Game Art**  
POST-SECONDARY

## **1 INTRODUCTION**

3D Digital Game Art 2024 Overview:

This pre-release project is intended to give you an idea of what to expect for the two-day competition in Quebec City 2024. Please see the Contest Description for more details.

During this competition, you will be challenged with 5 modules to demonstrate your skills. Each module will be judged independently and is independent of the previous module. Each module will have a distinct submission requirement. Each module will have you create an asset that is ultimately combined. In the final module, you will combine your results from each of the modules to create a final scene.

The modules will allow you to demonstrate:

1. Your ability to create concept art based on a design brief.
2. Your ability to model a hard surface object and a hi-poly sculpted object.
3. Your skill with UV unwrapping
4. Your ability to surface models.
5. Your skill to prepare a model for animation, and to animate the models.
6. Your ability to combine files and publish them on a platform (Sketchfab).

The two days of competition will be broken into modules for a total of 12 hours.

- Day 1 will start with a modelling module followed by a UV mapping and surfacing module.
- Day 2 will start with time allocated to finishing the UV mapping and surfacing module, followed by an animation module, and finish with an exporting/assembly module.
- You are asked to complete the concept art module prior to the contest and arrive with the concept art. More details are provided below to help you start practicing for this competition.

The game art you will create for these challenges will be styled after a Victorian steam punk aesthetic similar to that of the game “The Room”. Aim for photorealistic look.

A detailed design brief will be provided at the beginning of the contest. The brief will detail the required models, surfaces, and animations for the challenge.

## **2 DESCRIPTION OF PROJECT AND TASKS**

The competition will be composed of distinct modules over the course of two days. Additional detail for each module is provided below.

## **Module 1: Concept Art**

The first module will test your ability to create effective concept art. You are tasked to create concept art for a “Watch Work Ladybug”. Produce a piece of full colour concept art showing 3 views of the described model (Front Elevation, Side Elevation, and Three-quarter Perspective views). Use your preferred tools to demonstrate your skills with perspective, shading, and proportion to illustrate model as described below. Feel free to use 3D software to setup shapes to draw over and aid you with perspective.

### **Design Brief**

Develop concept art of a mechanical ladybug made of multiple tiny mechanical parts. The mechanical model should be a fine and delicate work that combines the art of jewelry, the precision of watch making, and the marvels of nature. The combination of components should convey the whimsical charm of a ladybug with the impressive skill of a jeweler and a watchmaker.

### **Visual description:**

The ladybug's various body parts have been crafted from various watch parts. The split shell of the back is made from delicate copper and lacquered with red and black. The ladybug's rounded abdomen is made from black leather watchstraps. The head is cleverly repurposed glass and metal from watches. The head should be clear on the top with a metal underside. Inside the head, we can see gears, cogs, and wheels. The ladybug's eyes, made from minuscule watch components and jewels, add a touch of character and depth to its face. Two delicate watch hands extend from the head, forming the ladybug's antennae, gracefully curving upwards, resembling sensory receptors.

On the underside of the ladybug's body, you'll find its intricate legs, each painstakingly crafted from tiny metal rods, attached using tiny screws and nuts, allowing them to move independently and giving the ladybug a lifelike appearance.

The ladybug's wings, equally detailed and visually captivating, are made from circular cutouts of watch faces. They're hinged to the body, allowing them to open and close, mirroring the way real ladybug wings fold. These wings are often adorned with fine, decorative patterns that give the ladybug a touch of elegance.

Gears and springs, strategically positioned inside the ladybug's body, add to the overall mechanical complexity. They serve as the internal mechanisms that power the ladybug's movements. When wound up using a small key or winding mechanism, the gears and springs activate the ladybug's legs and wings, causing them to move in a

lifelike and mesmerizing manner.

Vibrant red and glossy black paints cover its body, mimicking the familiar appearance of a ladybug.

This mechanical ladybug is a testament to craftsmanship, ingenuity, and attention to detail. It's both a work of art and a functional piece, blending the worlds of horology and entomology into a visually captivating and fascinating creation.

See second to last page of this document for reference images.

### **Concept Art Guidelines**

- The digital painting demonstrates shading;
- The digital painting demonstrates perspective drawing skills;
- Digital painting indicates proportion.
- The concept should consider the motion of the parts included.
- Consistent colour palette, lighting, and proportions tied to design brief;
- All necessary information is conveyed for modelling purposes
- Digital painting views are labelled with the 3 requested views (Front Elevation, Side Elevation, and Three-quarter Perspective views)

### **Submission Guidelines**

- Digital images (Should be submitted as a.jpg file format)
- Images should be 4K (3840 x 2160 pixels)
- Submissions will be collected by NTC members at the beginning of day 1 of the contest. (Communication systems will be explained on Day 1)

### **Module 2: Modelling**

You will be modelling two assets for this module. Competitors will be provided with a detailed design brief on the day of the contest.

- Item 1 (hard surface modelling) Competitors will model a solid surfaced item. Model should be produced with the possibility of animation in mind. Note; The model will only require materials like glass and metal, but contestants will have the opportunity to add surfacing details during the presentation module so basic or automatic UVing may want to be considered (Module 6).
- Item 2 (hi-poly/sculpting) Competitors will be challenged to model an intricate sculpted object. Note: The model will only require basic materials, but contestants will have the opportunity to add surfacing details during the

presentation module so basic or automatic UVing may want to be considered (Module 6).

- Modelling Guidelines
- Appropriate distribution of polys
- No Ngons
- Clean unified geometry
- Designs conform to the design brief

### **Submission Guidelines**

- Each model in this module must be exported and uploaded individually to Sketchfab.
- Submit Sketchfab links to the NTC by the end of the module.

### **Module 3: UV Mapping & Surfacing**

All competitors will be provided with the same unmapped model (FBX format) by the NTC. Competitors will create a UV map within their chosen 3D software. Submission of the UV map as a digital image is required for judging.

#### **UV Mapping Guidelines**

- UV Unwrap the objects provided. UV unwrap should cause as little distortion as possible to the wireframe and keep seams to a minimum. Note: Distortion of polygons should be kept to a minimum.
- Create UV Map appropriate to the model and professional standards, with the idea of surfacing them in mind.

#### **Submission Guidelines**

- We are looking for manually unwrapped shells in this module. (Do not use automatic unwrap tools)
- Upon finishing the UV's on your model. Apply the supplied UVGrid.PNG file as a texture, then export and upload to Sketchfab for judging.
- Submit your Sketchfab link for judging by the end of the module.
- Submit your UV map as a digital image (screen capture) to the NTC by the end of the module.

#### **Surfacing**

After you have submitted the UVmaps as requested, competitors will begin surfacing the same 2 models. Competitors will use their preferred tools to create detailed

surfaces. Surfaces and textures are expected to follow the design brief that will be provided on the day of the contest.

### **Surfacing Guidelines**

- The art style for these asset's surfaces should be inspired by the brief.
- Materials and Maps should use a PBR workflow and aim for photorealism.
- Surfaces should represent the requested material attributes.
- The appropriate materials and textures should be developed for the various objects
- Maps should look seamless on the model, with no obvious joins or breaks in texture.
- A variety of physical materials should be represented
- Multiple PBR maps should be used (normal, transparency, roughness, etc)

### **Submission Guidelines**

- The surfaced models must be exported and uploaded to Sketchfab.
- Send the completed Sketchfab links to the NTC by the end of the module.

### **Module 4: Animation**

Competitors will animate their scene based on the design brief. They will be tasked to prepare and animate some of their models from the Modelling Module 2, and the supplied models in the Surfacing Module 3.

### **Animation Guidelines**

- Ensure your animation loop is seamless and without glitches. The scene should end as it began.
- The animation should be produced with the Principles of Animation in mind, such as: ease in, ease out, anticipation, overlapping action, etc.  
(<https://lesley.edu/article/the-12-principles-of-animation>)
- The rig setup is appropriate for the desired animation.

### **Submission Guidelines**

- Create a draft quality video to demonstrate your animation (in Maya, create a “playblast”, in Blender, a “Viewport Render Animation” in Max, a “Create Preview Animation”). Your video can show simple shading to allow judges to

focus on the animation. Directions for where to submit the draft render will be given on the day of the contest.

## **Module 5: Export and Presentation**

To complete this contest, competitors will combine the assets from the Modelling Module 2 with their surfaced and animated assets from the Surfacing and Animation Modules 3 and 4. Competitors will combine their scenes and animation and upload the properly exported scene to Sketchfab within a ½ hour of the end of the competition.

### **Export and Presentation Guidelines**

- Export: In addition to the final presentation, ensure you have exported the individual assets as explained in each module at the end of each module.
- For the final module, competitors must combine the required assets into a complete scene. The design brief will clarify the required components.
- Each module should reflect the requirements to fit into the game style as outlined in the provided design brief.
- At this point you may surface the components from the Modelling Module (2) if you so choose. This will be an exercise in time management at deadlines, so competitors will want to ensure they don't over scope this aspect.
- Prepare the scene, lighting, composition, post processing effects, and animation settings in Sketchfab to optimize the presentation as you see fit.

### **Submission Guidelines**

- Submit the finished Sketchfab link of your final scene to the NTC by the end of the contest for judging.

Please submit any questions regarding this document to either  
Derek Ford (Chair) [fordd@assiniboine.net](mailto:fordd@assiniboine.net)  
Conor Macneill (Co-Chair) [cmacneill@niagaracollege.ca](mailto:cmacneill@niagaracollege.ca)

These images are intended to be used as reference only! And are **NOT** intended to be used as final designs. Contestants are encouraged to follow this theme but come up with their own unique designs for this project based on the provided design brief. The contestants designs should be produced with a 3D production pipeline in mind (ie. Modeling, Rigging, Animation etc.) Again, feel free to use 3D software to setup shapes to draw over and aid you with perspective of your design.

Please feel free to reach out to the contest if you need anything clarified on the design brief.





A 01		A 03		A 05		A 07		A 09	
	B 02		B 04		B 06		B 08		B 10
C 01		C 03		C 05		C 07		C 09	
	D 02		D 04		D 06		D 08		D 10
E 01		E 03		E 05		E 07		E 09	
	F 02		F 04		F 06		F 08		F 10
G 01		G 03		G 05		G 07		G 09	
	H 02		H 04		H 06		H 08		H 10
I 01		I 03		I 05		I 07		I 09	
	J 02		J 04		J 06		J 08		J 10



WRITING



PROBLEM SOLVING



CREATIVITY & INNOVATION



DIGITAL