

# DD 444

# 3D Character

# Development

College of Art+Design  
NJIT

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W:600PM – 850 PM

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Office Hours  
By Appointment

## DESCRIPTION

The course will introduce students to the language and conventions of manipulating tools and techniques to develop and create 3 dimensional character design.

## OBJECTIVES

Provide an exposure to visual character development & storytelling.  
Develop a creative direction methodology for strong character design.  
To develop a sense of quality of craft with character development and design.  
To develop the ability to develop a character from concept stages to final product.

## INSTRUCTOR EXPECTATIONS

At all classes you are expected to bring new computer models, renderings, and hand drawings (sketches) relevant to the project in progress. You are expected to work each and every day on the projects assigned. If for any reason you doubt your ability to do so you should seriously consider whether you belong in this studio. While this course introduces and uses several software packages, you should not rely on this course to teach them to you. Make use of all available resources to learn the software, books, online help, instructors and fellow students. You are accountable for technical and creative process for this class.

## CLASS POLICIES

Assignments.

Assignments are due at the beginning of class. Assignments that are not finished will not be accepted or graded. Late work will be graded down one letter grade for every class late. All preliminary and final work must be uploaded to Class Google Drive and KEPLER for presentations and grading.

Academic Warning.

Students who do not complete and submit assignments on time and to a satisfactory standard will fail the class. It is the student responsibility to obtain missed assignments from other classmates and make up work in time for the next class.

Class Policies.

Cell phones, and non-course related internet usage will not be used during class.

## RECOMMENDED BIBLIOGRAPHY

Autodesk Maya documents: <https://help.autodesk.com/view/MAYAUL/2022/ENU/>  
Autodesk Maya 2023 Basics Guide by Kelly L. Murdok

## GRADING

The following factors will be considered when assigning your grade.

### **A. Ability to intellectually engage the material investigated in the course.**

Students are to thoughtfully engage the material presented in readings, presentations and discussions. Responses to questions should be directly and thoughtful related to topics investigated in the assignment.

### **B. Communication.**

The ability to communicate ideas and concepts to others. This includes written, verbal, and visual communication skills. Outside critics will be brought in at the end of some projects to review your work in an open forum environment. These presentations should be considered “client presentations” and should be presented with a level of professionalism consistent with your work.

### **C. Independent thinking.**

Independent thinking will be evaluated and will be based on the ideas and thoughts developed on an independent basis by the student. Depth of creative thought is primary to the independent thinking evaluation. Independent thinking must be clearly demonstrated in all aspects of the course including verbal participation in the classroom.

### **D. Professional Attitude.**

Students are to express and articulate clearly their view toward the topics in this course in a method reflects the quality of a professional in the field of design. It is the ethical responsibility of the student to support the learning community in this course in a positive and constructive manner.

Professional attitude includes the ability to receive and give critical feedback, respond to challenging situations with a positive attitude, and support an excellent working studio environment are all essential to receiving high marks in professional attitude evaluations.

### **Grade breakdown.**

10% Class Participation

90% Projects 1, 2, 3, 4, 5 (18% each)

A/4.0 (superior) B+/3.5 (excellent) B/3.0 (very good) C+/2.5 (good) C/2.0 (acceptable)  
D/1.0 (minimum) F/0.0 (inadequate).

## PDF+CRITIQUE

All projects are accompanied by prepared, well designed PDF and presentation to the class. Each grade will be based on final images (50%) and PDF and presentation (50%)

**ATTENDANCE,  
ACCOMMODATIONS  
FOR STUDENTS  
WITH DISABILITIES**

IF YOU ARE SICK, PLEASE STAY HOME. Student is responsible for letting instructor know of their absence and making up the work. Absences for illness in order to be excused MUST be accompanied by documentation from professional medical personnel who are NOT members of your family. Since religious holidays are known in advance, students who expect to be absent due to religious holidays must notify their instructor by the second week of class.

Students with either freshman or sophomore standing also have an attendance requirement overlaid on the grading criteria. No more than three unexcused absences are permitted without a grade reduction. Each unexcused absence above the three (starting with the fourth) will result in a grade reduction of .5 for the semester. In other words, four absences would result in a maximum grade of B+ (assuming everything done is of "A" quality), five absences would result in a maximum grade of "B", six in a maximum grade of "C+", etc. Students do NOT receive extensions for submission of work due to any unexcused absences. Acceptance of late work is at the discretion of the individual instructor.

NJIT and instructors will endeavor to make any accommodations required and necessary for the success of students with disabilities. However, in order to receive accommodations disabilities MUST be documented with the NJIT Disability Office AND notification of request for accommodation must be made to the instructor by the second week of class. No accommodations can be granted "after the fact" unless due to a situation (injury/illness/etc.) that occurs or is documented during the semester. In those instances accommodations will commence upon notification or observation of the disability.

**PROJECT 1  
BRAINSTORM  
AN ARCHETYPE**

**Goal:**

Conceptualize a new character. This is a visual conceptualizing exercise through digital media and or paper & pencil, ink or paint.

**Task:**

Create 4-8 rough sketch images, using your own created materials. This should be executed via character boards or idea sketches or some kind of a visual brainstorm that gives your thoughts on the project some form. Character sketches should be loose, rough, and some should just be silhouettes. Once you have created some rough ideas of your character we then critique concepts. Once character designs are approved we are finished with pre-production. Final images have to be stills.

Research artist Carlos Huante , <http://www.carlos-huante-monstruo.com/>  
<https://www.thegnomonworkshop.com/tutorials/the-techniques-of-carlos-huante-1>

**Delivery:**

PDF+Presentation

**Tools:**

Any tools you want.

**Dates:**

Final Presentations: 09/10/25

**PROJECT 2  
POSES & COLOR  
VARIATIONS**

**Goals:**

Conceptualize color and texture variations of your approved character in different poses. Finalize pre-production phase.

**Task:**

Create a few quick, rough sketches of your character in different key poses. Create a character sheet with your character in favorite pose from previous sketch sessions, duplicate the pose horizontally 3 times. And test different color combinations.

Each of the 3 repeat pose character copies should have different color variations. Conceptualize textures as well. Create a mood board or texture board along with the color variations.

At the end of assignment, finalize and improve your style, mood and palette for this character.

**Delivery:**

5-7

Stills

Variations + Presentation

**Tools:**

Corel Painter, Maya, zBrush, Photoshop, Illustrator, Markers & Paper, Pencil, Ink, etc.

**Dates:**

Assigned: 09/17/25

Final Presentations: 9/24/25

**PROJECT 3  
EARLY PHASE**

**Goals:**

Take the approved character design from last 2 assignments and give it some form.

**Task:**

Start the production phase. begin to create a base mesh of your character. Create front and side orthographic views. Use these sketches and begin to model your character in 3D. Model from the front and side orthographic sketches of your character. Start the process and create a low polygon 3d model from your approved 2d character front and side orthographic views.

Be sure to utilize your pre-production concepts and begin to create your character.

Use a topology of all quads.

**Delivery:**

7-8 screenshots of basemesh in Maya.

PDF+Presentation

**Tools:**

Maya.

**Dates:**

Assigned: 10/01/25

Mid Phase: 10/08/25

Final Presentations: 10/15/25

**PROJECT 4  
3D CHARACTER  
PRODUCTION**

**Goals:**

Use your concepts to create a 3d character.  
Finalize the low poly mesh and work your way up to a detailed character.

**Task:**

Use 3d software to finish modelling your conceptualized character.  
For this assignment I'm only looking for a very clean mesh of your model.

**Topology and Clean Geometry.**

Check your topology and make sure are using quads instead of triangulated polys for this. Topology should flow smoothly from quad face to quad face. If you need to please rework or re-topologize your mesh. Be sure to merge any unconnected vertices that need to be merged. I also cant stress enough how important it is to check your character for seams or holes that Shouldn't exist in your model and fix it all.

Set up your UV's.

**Delivery:**

6 screen shots

images

PDF+Presentation

**Tools**

Maya, zBrush, Mudbox, etc.

**Dates**

Assigned: 10/22/25

Mid Phase: 11/05/25

Presentations: 11/12/25

**PROJECT 5  
FINALIZE YOUR  
PRODUCTION**

**Goals**

Finish your 3D Character. Add Materials, Texture, Lights and anything else your Character might need.

**Task:**

Take your 3d character model and begin to add color via materials and textures. Pay attention to how the textures and materials react with your topology. Make sure that your textures and materials have the appropriate resolution and don't look too blurry or pixelated.

**Delivery:**

3-4 still, detailed, high resolution images of your 3d model  
PDF+Presentation

**Tools**

Maya, Mudbox, zBrush, Substance Painter, etc.

**Dates**

Assigned: 11/19/25

Mid Review: 12/03/25

Presentations: 12/10/25