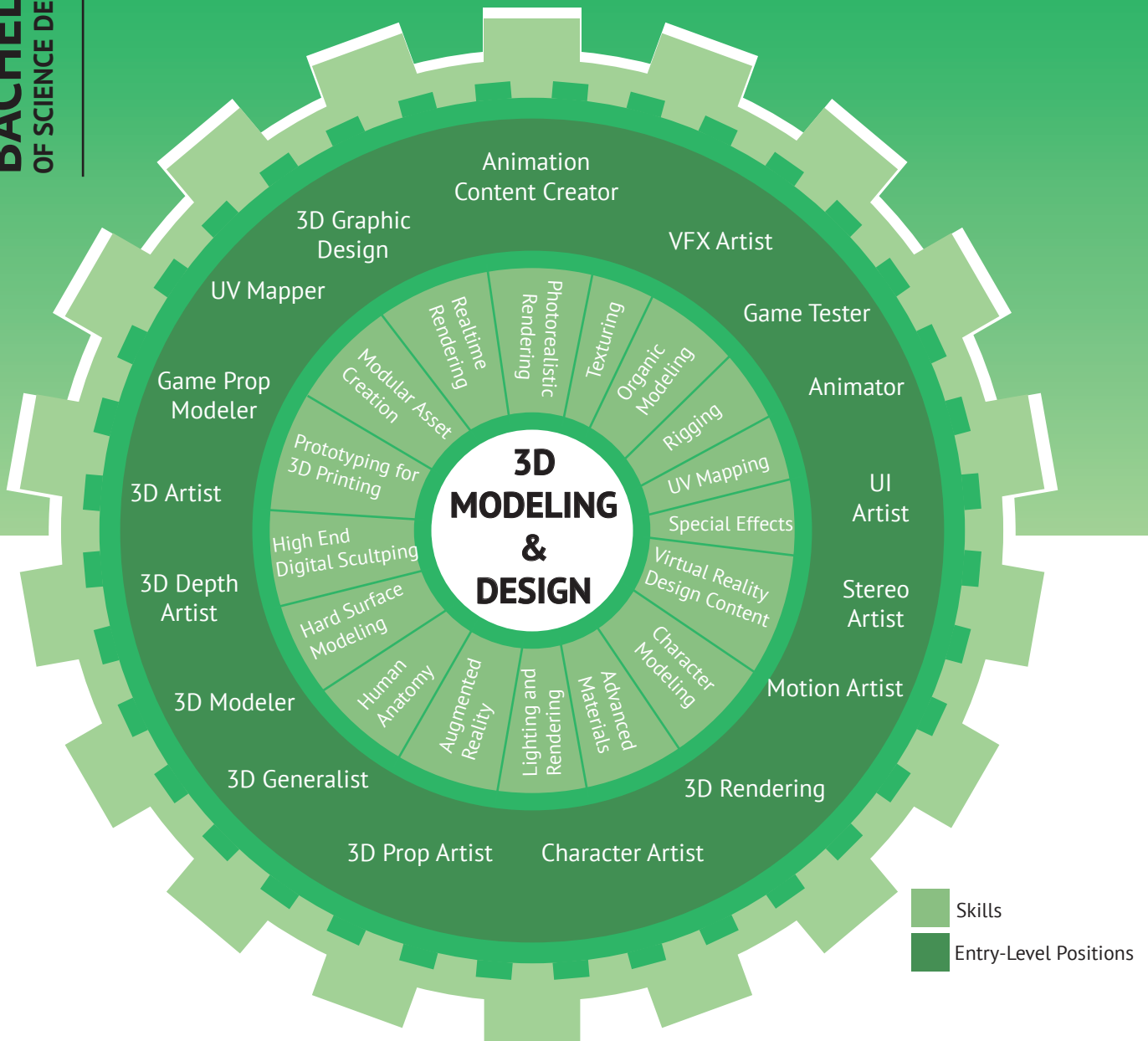


## 3D MODELING & DESIGN

Students completing the Bachelor of Science Degree: Media Arts (emphasis in 3D Modeling & Design) will have acquired knowledge of character design and development, modeling, texturing, rendering and lighting. Mastering of these skills results in artists/designers enabled to express visual creativity through technology and the creative process.



*Jobs listed are possible positions and not a guarantee of employment.*

### 1-3 YEARS OF EXPERIENCE

Game Character Modeler / Rigger  
 Game 3D Environment Designer  
 Texture / Material Artist for Games  
 3D Prototyping for Children's Toys  
 Mobile Game 3D Artist  
 3D Medical Visualization Artist

### 5+ YEARS OF EXPERIENCE

Feature Film Character Modeler / Rigger  
 Feature Film Environmental Artist  
 Cinematics / Facial Modeler Artist  
 Concept / Story Artist  
 Rendering / Lighting Artist  
 Modeling Supervisor

# B.S. IN MEDIA ARTS: 3D MODELING & DESIGN CURRICULUM

## TERM 4

### **IA104 Introduction to 3D**

*(4.5 semester credit hours/100 clock hours)*

Introduction to 3D (IA104) introduces students to 3D and 3D applications, techniques, and theory with an emphasis on Autodesk's Maya®. Students will learn and practice the fundamental methods of modeling, texturing, lighting, and rendering. Polygon Modeling, UV Texture Mapping, Arnold Rendering Engine, and Turntable Animation.

### **IV104 Introduction to Digital Video Production**

*(4.5 semester credit hours/100 clock hours)*

Introduction to Digital Video Production (IV104) offers the fundamentals of Digital Video Production from pre-production (planning, storyboarding) to production (shooting, lighting, sound, green screen) to post-production (editing, compositing, titles, color correction, audio, and music). Professional film and video analysis, genre division and film fundamental elements will be studied. Video compression, with an emphasis on web delivery, will be introduced.

### **IW104 Fundamentals of Web Design**

*(4.5 semester credit hours/100 clock hours)*

Fundamentals of Web (IW104) will offer a strong foundation in web design, Graphical User Interface (GUI) and web page structure. Topics will include HTML, CSS, FTP, project management, usability and interactive design strategies. Beginning concepts of programming (PHP and JavaScript), behaviors and CMS (Content Management Systems) will also be introduced.

## TERM 5

### **3D310A Hard Surface Modeling - Prop Modeling**

*(5.00 semester credit hours/100 clock hours)*

Hard Surface Modeling - Prop Modeling (3D310A) discusses, in detail, traditional subdivision modeling techniques in Autodesk Maya. Special emphasis is placed on clean topology and advanced UV layout techniques. Finished models will be custom textured using Photoshop.

### **3D320A Advanced Materials**

*(5.00 semester credit hours/100 clock hours)*

Advanced Materials (3D320A) focuses on materials, textures, rendering and lighting. Physically based rendering (PBR) workflow is the core foundation of this course. Students will learn how to apply materials, normal maps and textures directly to their models as well as how to render directly inside the Unreal Game Engine.

### **3D330A Anatomy for Character Modelers**

*(5.00 semester credit hours/100 clock hours)*

Anatomy for Character Modelers (3D330A) focuses around human anatomy. Students learn surface anatomy and bony landmarks to help create believable human forms. The goal of this class is to have a clear understanding of the underlying muscle anatomy that could translate to any type of organic creature. Base meshes are created in Autodesk Maya with Pixologic Zbrush used for the detailing.

## TERM 6

### **3D410A Advanced Organic Modeling**

*(5.00 semester credit hours/100 clock hours)*

Advanced Organic Modeling (3D410A) focuses on creating a high-resolution organic creature model from scratch. Students use Pixologic ZBrush to create the character. Next, students will learn how to apply their texturing skills to creating realistic organic tissue. Projects will be rendered in Autodesk Maya and Marmoset. Edge-flow, Displacement maps, Normal Maps and advanced ZBrush techniques are key concepts of this course.

### **3D420A Game Character**

*(5.00 semester credit hours/100 clock hours)*

Game Character (3D420A) class instructs students on the entire character workflow from beginning to end. Students will create a single original character from the ground up and carry it through the entire pipeline, including modeling, high-poly sculpting, texturing and shading, and rigging for animation. Finally, students will learn how to package and export their finished character into a game engine.

### **3D430A Modeling Thesis**

*(5.00 semester credit hours/100 clock hours)*

In the Modeling Thesis (3D430A) class is the students' will design and model an original 3D model based on their desired specialty within the industry. This may include characters or props for video games, characters or props for film production, product design, architectural visualization, 3D printed toy design, etc. Heavy emphasis will be placed on self-reliance and problem solving. Lectures will be custom tailored to the needs of each student.

### **PP200 Portfolio Project**

*(4.5 semester credit hours/100 clock hours)*

No transfer credit accepted for this course. As an outcome of the Portfolio Project (PP200) students will create a digital portfolio (demo reel and web page) to demonstrate the skills and knowledge they have acquired in their specialized program. Emphasis will be placed on presentation skills and strategies suitable for gaining employment.

## GENERAL EDUCATION

FIL201	Film and Society
MUS201	Enjoyment of Music
ENV201	Environmental Science II
MAT204A	Mathematics & Computation
LIT201	Topics and Figures in Literature
HUM203	History of Graphic Design
ENG202	Digital Media Writing
ENG204A	Marketing & Business Com.
ART202	Fundamentals of Illustration