

# GAME 130 – Digital Imaging Techniques

UNM Valencia, Game Design and Simulation

updated 1-2018

Spring 2018

Monday | Wednesday, 1:30 pm – 2:45pm

**Instructor: Jonathan Morrison**

[jonmorri@unm.edu](mailto:jonmorri@unm.edu)

Campus Office Hours:      Monday & Wednesday      10:00-12:00  
   Tuesday & Thursday      10:00-12:00  
   Also by appointment  
   B&T 107

Office: Business & Technology Room 107C

## Course Description

This course focuses on creating and manipulating UV's. Utilizing Zbrush, Roadkill, Photoshop, and Substance to create diffuse, ambient occlusion and normal maps as well as PBR material maps. After learning how to create the different maps the focus will be on transferring them into Unreal Engine 4.

## Objectives

- Demonstrate a working knowledge of creating UV's in Zbrush
- Demonstrate a working knowledge of creating UV's in 3ds Max
- Demonstrate a working knowledge of the different map types, Ambient Occlusion, Normal and Diffuse Maps.
- Using Photoshop to create texture maps
- Demonstrate a working knowledge of the latest software Substance for PBR texturing

## Required Text

None

## Student Responsibilities/Attendance/Participation

### Student Responsibilities:

- Students must have basic computer and file management skills for all GAME courses. Custom tutoring services are available through the TLC. Required pre/co requisite is IT 101: Computer FUNdamentals. Students that fall behind due to lack of basic computer skills will be dropped.
- Bring a USB Flash Drive (at least 32 GB) to every class. Make sure it is clearly labeled with your name on it.
- Have access to the required text(s) and other subscriptions as required
- If you have a disability, please inform me of your needs as soon as possible to ensure that your needs are met in a timely manner.
- Cell phones need to be muted during class times. If you must receive a call, leave the lab before you answer. No phone conversations in the studio. No web browsing, email, or text messaging during lectures, demos, discussions, or critiques.
- **COMPUTERS WILL BE OFF DURING ALL CRITIQUES!!!**

### Attendance/Participation:

- Students are required to complete all projects on time, participate in scheduled critiques/class discussions/presentations, and maintain a safe, respectable, positive lab environment.
- Students are required to attend class, arrive on time, remain present until the end of class, and be prepared for each day's work. More than three absences without prior consultation may result in a failing grade or a drop from the class. Leaving early or arriving late three times results in one absence.
- If you have not attended class for three consecutive class periods and have made no attempt to call/email/IM/contact me, you WILL be dropped.
- Students who do not attend the first week of class will automatically be dropped.

## Grading Policy

### Grading:

- Grading is based on a timely completion of course assignments, the quality of individual technical and critical development, conceptual progress, personal commitment and the ability to work in a community studio setting. Personal commitment involves regular attendance, consistent effort, completion of work, participation in presentations, critiques and class discussions, and the general willingness to try. Make each project meaningful to yourself!
- Each assignment will culminate in a presentation, which will consist of discussing your work and/or projecting your completed work in class for all to see. All due dates will be announced in Blackboard, as well as on the syllabus. No full credit will be given for any late work. If an assignment is not presented on time, an automatic 0 will be issued. You will need to make arrangements with me if you are planning to make-up the work, and a fair grade will be issued once the work has been submitted, presented, and critiqued, minus an automatic one letter grade deduction.
- Incompletes are rarely issued. If 75% of the semester's work/projects/deliverables and participation/attendance have been completed with a satisfactory grade, and incomplete may be issued.

## Grading Breakdown

**Semester Requirements:**

Projects	24 points	
Final Project	26 points	
Assignments	20 points	
Midterm and Final Exams	30 points	15 points each

**Extra Credit:**

Extra Credit      10 points maximum for the semester

Points will be added up and a letter grade will be issued according to the following scale:

A+	101+
A	94-100
A-	90-93
B+	88-89
B	84-87
B-	80-83
C+	78-79
C	74-77
C-	70-73
D+	68-69
D	64-67
D-	60-63
F	50-59

How to Contact the Instructor

Campus Office Hours:    Monday & Wednesday    10:00-12:00  
                                  Tuesday & Thursday    10:00-12:00  
                                  Also by appointment  
                                  B&T 107C

Office: Business & Technology Room 107C

**Email:**

You can email me at [jonmorri@unm.edu](mailto:jonmorri@unm.edu) In the Subject Line of the email, ALWAYS write your full name and class number.  
For example – “Jonathan Morrison GAME 205”

## Support Information, Resources, & Tutorials

**Access to the book:**

- University of New Mexico Valencia Bookstore:
  - o <http://www.unm.edu/~unmvc/Bookstore/Bookstore.htm>
  
- Library System:
  - o University of New Mexico Valencia Campus Library:
    - <http://www.unm.edu/~unmvclib/>
      - There will be one copy on reserve. You will need to check it out at the front desk. It will only be available for 2-hour checkout, and cannot ever leave the library.
  
- Purchase Online:

If you plan on purchasing this book online, you need to do so immediately. We will start using it right away! A couple of sources for purchase online are:

  - Amazon.com: [www.amazon.com](http://www.amazon.com) - some new, some used
  - Half.com: [www.half.ebay.com](http://www.half.ebay.com) - discounted prices for used books!

**Open Studio Time – Digital Media Arts Open Lab & Darkroom:**

- Located in Room 123A in the Business & Technology Building (directly in front of the current B&T open computer lab Room 123). You will need to enter the lab through the current B&T computer lab and sign-in to use the computers.
- Monday through Thursday 8:00am to 8:00pm
- Friday 8:00 am to 2:00 pm

**Other tutorials:**

- I will post a number of links to video tutorials in Blackboard for this course.

**Instructor Support:**

- Please see “How to Contact the Instructor” for methods of contacting the instructor for help.

**Community Support:**

We will have a HELP FORUM discussion board in the Blackboard course. Use this as a place to post questions to the community. It is important for peer learning and peer communication to enhance our community.

# Course Schedule

## Spring 2018:

Semester begins January 16

Semester ends May 11

## HOLIDAYS:

Spring Break: March 11-18

Dates	Schedule
<u>Week 1</u>	<ul style="list-style-type: none"><li>• Introductions</li><li>• Review Syllabus</li><li>• Review Blackboard</li><li>• Lecture: What is a UV, UV a can</li></ul>
<u>Week 2</u>	<ul style="list-style-type: none"><li>• Lecture: UVing and basic types of projections</li><li>• <b>Project 1: UV a Cabin</b></li></ul>
<u>Week 3</u>	<ul style="list-style-type: none"><li>• Lecture: Seams seams and more seams!</li><li>• Roadkill</li><li>• Turn in Project 1</li></ul>
<u>Week 4</u>	<ul style="list-style-type: none"><li>• <b>Project 2: Texturing a Turtle model</b></li><li>• Lecture: UVing and texturing a turtle</li><li>• Using photoshop for painting textures</li></ul>
<u>Week 5</u>	<ul style="list-style-type: none"><li>• Lecture: cont' UVing and texturing a turtle</li><li>• Using photoshop for texturing via images</li></ul>
<u>Week 6</u>	<ul style="list-style-type: none"><li>• Lecture: All the maps</li><li>• <b>Project 3: Texturing Sci Fi models</b></li><li>• <b>Project 2: Turn in</b></li></ul>
<u>Week 7</u>	<ul style="list-style-type: none"><li>• Lecture: Creating a character UV</li><li>• <b>Project 4: UV and Texture a game character for midterm</b></li><li>• Project 3: Turn in</li></ul>
<u>Week 8</u>	<ul style="list-style-type: none"><li>• Work on midterm project</li></ul>
<u>Week 9</u>	<ul style="list-style-type: none"><li>• Work on midterm project</li></ul>
<u>Week 10</u>	<ul style="list-style-type: none"><li>• Present characters (Project 4)</li></ul>

<u><b>Week 11</b></u>	<ul style="list-style-type: none"> <li>• Lecture: How to create alpha maps and what they are used for</li> <li>• <b>Project 5: Small garden</b></li> </ul>
<u><b>Week 12</b></u>	<ul style="list-style-type: none"> <li>• Present Project 5</li> <li>• Lecture: Zbrush sculpting and painting</li> <li>• <b>Project 6: Zbrush Wall</b></li> </ul>
<u><b>Week 13</b></u>	<ul style="list-style-type: none"> <li>• Lecture: Zbrush exporting maps and mesh</li> <li>• Project 6: Turn in</li> </ul>
<u><b>Week 14</b></u>	<ul style="list-style-type: none"> <li>• Lecture: Substance Designer and PBR Materials</li> <li>• <b>Color ID maps</b></li> <li>• <b>Final Substance project assigned</b></li> </ul>
<u><b>Week 15</b></u>	<ul style="list-style-type: none"> <li>• <b>Work on Final</b></li> </ul>
<u><b>Week 16</b></u>	<ul style="list-style-type: none"> <li>• Postmortem</li> <li>• <b>Final Project Presentations</b></li> </ul>

\*Schedule is very tentative and could easily change depending on the classes needs