

# Course Syllabus

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**NOTE: This syllabus is subject to change during the semester. Please check this syllabus on a regular basis for any updates**

**Department** : Computer Sciences  
**Course Title** : BASIC ANIMATION  
**Section Name** : ARTV\_1303\_513  
**Start Date** : 08/22/2011  
**End Date** : 12/03/2011  
**Modality** : FACE-TO-FACE  
**Credits** : 3

## Instructor Information

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**Name** : Josette Zeigler  
**OC Email** : jzeigler@odessa.edu  
**OC Phone #** : 432-352-3399

## Course Description

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ARTV 1303 Basic Animation (3-1) (10.0304) 3 hours

Examination of concepts, characters, and storyboard for basic animation production. Emphasizes creating movement and expression utilizing traditionally or digitally generated image sequences. Lab fee required.

## Prerequisites/Corequisites

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Prerequisite: ITSC 1401/BCIS 1405.

## Scans

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SCANS 1, 2, 3, 5, 6, 8, 9

## Course Objectives

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Describe the history and evolution of video and computer games and game genres; identify the phases and processes involved in developing a computer game; design a simple computer game from initial concept to final design document; and describe current trends in the game industry with regards to hiring practices, working conditions, etc.

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**After completing this course, the student should be able to demonstrate competency in:**

- 1.0 General Computer Concepts
  - 2.0 Windows XP
  - 3.0 Application software (Autodesk Maya 2011) knowledge and use
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### **COURSE REQUIREMENTS:**

ALL STUDENTS ARE EXPECTED TO:

1. Take all exams and complete all homework.
2. Complete all lab projects, which include Word, Excel, Access and PowerPoint lessons and Projects.

### **WEIGHT OF COURSE REQUIREMENTS:**

|                  |     |
|------------------|-----|
| Chapter Synopsis | 25% |
| Attendance       | 5%  |
| Final Exam       | 10% |
| Projects         | 60% |

### **METHOD OF EVALUATION:**

The general weighting of exams, assignments, and final exam for the Final grade in this particular course are:

**A: 90 - 100**

**B: 80 - 89**

**C: 70 - 79**

**D: 60 - 69**

**F: 0 - 59**

**NOTE: ALL ASSIGNMENTS FOR THE ENTIRE SEMESTER ARE POSTED ON THE CLASS WEBSITE. ALL QUIZZES AND LAB TEST DATES WILL BE ANNOUNCED ON THE CLASS WEBSITE.**

### **ATTENDANCE POLICY**

Attendance will be recorded and you will be graded once a week according to the number of days the class meets per week. For example, T Th classes meet twice per week. If you attend both classes for the week, you will receive a 100 for the week. If you miss 1 day with an UNEXCUSED absence, then you will receive a 50 for the week. MWF classes meet 3 times per week. If you miss 1 day, your grade is a 66; if you miss 2 days, your grade will be a 33, If you miss all classes with UNEXCUSED absences, you will receive a 0 for the week. If you are enrolled in a web class, your attendance grade comes from the discussion board.

### **COURSE REQUIREMENT DEADLINES**

Credit will be given for ONLY those exams completed on exam days, and homework, and projects completed and turned in by the announced deadlines, unless **prior arrangements** have been made with and approved by the instructor. Zeros (0) will be recorded for any work for which arrangements have ***not*** been approved!!

- **NO late homework will be accepted.**
- **There are NO make-up exams, UNLESS you have made prior arrangements with me.**

**NO EXCEPTIONS TO THIS POLICY WILL BE MADE.**

### **IMPORTANT NOTE**

It is the policy of this instructor to help you complete this course. If you believe that you cannot complete this class due to medical, family, financial, social, or job related problems or conflicts, you should see your instructor to discuss your options.

### **ACADEMIC ETHICS:**

You are expected to create, edit format and print out your own assignments, take tests without notes or other outside assistance. **ALL WORK IS EXPECTED TO BE YOUR OWN.**

**If unethical behavior is detected:**

**WITH YOUR FIRST OFFENSE, YOU WILL RECEIVE ZEROS FOR THE PROJECT IN QUESTION.**

**WITH YOUR SECOND OFFENSE, YOU WILL BE REMOVED FROM THE CLASS WITH A FINAL GRADE OF "F," NO QUESTIONS ASKED.**

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**Required Readings/Materials**

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**TEXTBOOKS:**

- **\_Introducing Maya 2011, by Dariush Derakhshani**

**SUPPLIES:**

- **An external hard drive/ jumpdrive, at least 4GB**

**Course Requirements (Lectures, Assignments and Assessments)**

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Credit will be given for ONLY those exams completed on exam days, and homework, and projects completed and turned in by the announced deadlines, unless **prior arrangements** have been made with and approved by the instructor. Zeros (0) will be recorded for any work for which arrangements have ***not*** been approved!!

**NO late homework will be accepted.**

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**Course Requirements (Lectures, Assignments and Assessments)**

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**Instructor:** Josette R. Zeigler

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**Assignments & Activities**

| <b>Chapter</b>  | <b>Assignment</b>   | <b>Description</b>   | <b>Due</b> |
|---|---|--|------------|
| Chapter 1:<br>Introduction to<br>Computer Graphics<br>and 3D. | Read entire chapter and<br>write Synopsis, Submit to<br>Blackboard. | Art? , Computer Graphics, The Stages of Production, The CG<br>Production Workflow, Core Concepts, Basic Film Concepts. | <i>TBA</i> |

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|--|--|---|-----|
| Chapter 1: Introduction to Computer Graphics and 3D.         | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Continue Practice lessons : Art, Computer graphics, the CG production workflow, Core concepts, Basic Film Concepts  | TBA |
| Chapter 2: Jumping In Headfirst, With Both Feet.             | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | You Put the U in UI, Project Overview: The Solar System, The Preproduction Process: Planning, Creating a Project, The Production Process: Creating and Animating the Objects, Hierarchy and Maya Object Structure, The Solar System Resumed, Outputting Your Work: Playblasting.<br><b>Project: The Solar System.</b> | TBA |
| Ch. 2 cont'd   | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | You Put the U in UI, Project Overview: The Solar System, The Preproduction Process: Planning, Creating a Project, The Production Process: Creating and Animating the Objects, Hierarchy and Maya Object Structure, The Solar System Resumed, Outputting Your Work: Playblasting.<br><b>Project: The Solar System.</b> | TBA |
| Chapter 3: The Maya 2011 Interface.                          | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Navigating in Maya, Maya's Layout, Panels and Frequently Used Windows, Customizing Maya.  | TBA |
| Chapter 3: The Maya 2011 Interface.                          | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Navigating in Maya, Maya's Layout, Panels and Frequently Used Windows, Customizing Maya.  | TBA |
| Chapter 4: Beginning Polygonal Modeling..                    | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Planning Your Model, Polygon Basics, Poly Editing Tools, Putting the Tools to Use:<br><b>Project: Making a Simple Hand</b>  | TBA |
| Chapter 4: Beginning Polygonal Modeling.                     | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Creating Areas of Detail on a Poly Mesh, Modeling Complex Objects: The Classic Steam Locomotive, Suggestions for Modeling Polygons, Planning a model, Polygon basics, and poly editing tools. <b>Project: Begin Modeling Train</b>  | TBA |
| Chapter 4: Beginning Polygonal Modeling.                     | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Creating Areas of Detail on a Poly Mesh, Modeling Complex Objects: The Classic Steam Locomotive, Suggestions for Modeling Polygons, Planning a model, Polygon basics, and poly editing tools <b>Project: Continue Train</b>   | TBA |
| Chapter 4: Beginning Polygonal Modeling.                     | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Creating Areas of Detail on a Poly Mesh, Modeling Complex Objects: The Classic Steam Locomotive, Suggestions for Modeling Polygons, Planning a model, Polygon basics, and poly editing tools <b>Project: Train</b>  | TBA |
| Chapter 5: Modeling With NURBS, Subdivisions, and Deformers. | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | NURBS!, Using NURBS Surfacing to Create Polygons, Converting a NURBS Model to Polygons, Editing NURBS Surfaces, Patch Modeling: A Locomotive Detail<br><b>Project: Train</b>  | TBA |
| Chapter 5: Modeling With NURBS, Subdivisions, and Deformers. | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | NURBS!, Using NURBS Surfacing to Create Polygons, Converting a NURBS Model to Polygons, Editing NURBS Surfaces, Patch Modeling, Using Artisan to Sculpt NURBS, Modeling with Simple Deformers, The Lattice Deformer, Animating through a Lattice, Subdivision Surfaces, <b>Project: Creating a Starfish</b>           | TBA |
| Chapter 5: Modeling With NURBS, Subdivisions, and            | Read entire chapter and write Synopsis and do chapter project, Submit to             | NURBS!, Using NURBS Surfacing to Create Polygons, Converting a NURBS Model to Polygons, Editing NURBS Surfaces, Patch Modeling, Using Artisan to Sculpt NURBS,  | TBA |

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|---|--|--|------------|
| Deformers.  | Blackboard.  | Modeling with Simple Deformers, The Lattice Deformer, Animating through a Lattice, Subdivision Surfaces, <b>Project: Building a Teakettle</b>  |            |
| Chapter 5: Modeling With NURBs, Subdivisions, and Deformers | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | NURBS!, Using NURBS Surfacing to Create Polygons, Converting a NURBS Model to Polygons, Editing NURBS Surfaces, Patch Modeling, Using Artisan to Sculpt NURBS, Modeling with Simple Deformers, The Lattice Deformer, Animating through a Lattice, Subdivision Surfaces, <b>Project: Building a Teakettle, Starfish details</b> | <i>TBA</i> |
| Chapter 6: Practical Experience.                            | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Using Reference Planes, Modeling the Side Panels, Modeling the Wagon Body, Inserting the Handlebar, Modeling the Wheels, Modeling the Wood Railings, Adding Extra Details. <b>Project: Beginning the Wagon</b>   | <i>TBA</i> |
| Chapter 6: Practical Experience.                            | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Using Reference Planes, Modeling the Side Panels, Modeling the Wagon Body, Inserting the Handlebar, Modeling the Wheels, Modeling the Wood Railings, Adding Extra Details. <b>Project: Beginning the Wagon</b>   | <i>TBA</i> |
| Chapter 6: Practical Experience.                            | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Mapping the Box's Reference Planes with Hypershade, Organizing Workflow with Layer Editor, Modeling the Decorative Box, Editing the Decorative Box Model Using the Shelf, Continuing the Decorative Box Model, and Finishing the Decorative Box Mode. <b>Project: Building a Decorative Box</b>                                | <i>TBA</i> |
| Chapter 6: Practical Experience.                            | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Mapping the Box's Reference Planes with Hypershade, Organizing Workflow with Layer Editor, Modeling the Decorative Box, Editing the Decorative Box Model Using the Shelf, Continuing the Decorative Box Model, and Finishing the Decorative Box Mode. <b>Project: Building a Decorative Box</b>                                | <i>TBA</i> |
| Chapter 7: Maya Shading and Texturing.                      | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Maya Shading, Shader Types, Shader Attributes, Texturing the Axe, Textures and Surfaces, Texturing the Red Wagon, Photoreal Mapping: The Decorative Box. <b>Project: Adding Shaders and Texturing previous work</b>  | <i>TBA</i> |
| Chapter 7: Maya Shading and Texturing.                      | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Maya Shading, Shader Types, Shader Attributes, Texturing the Axe, Textures and Surfaces, Texturing the Red Wagon, Photoreal Mapping: The Decorative Box. <b>Project: Adding Shaders and Texturing previous work</b>  | <i>TBA</i> |
| Chapter 8: Introduction to Animation.                       | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Keyframe Animation—Bouncing a Ball, Throwing an Axe, Replacing an Object, Animating Flying Text, Rigging the Locomotive, Part 1, Animating a Catapult. <b>Project: Adding Animation previous work</b>  | <i>TBA</i> |
| Chapter 8: Introduction to Animation.                       | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Keyframe Animation—Bouncing a Ball, Throwing an Axe, Replacing an Object, Animating Flying Text, Rigging the Locomotive, Part 1, Animating a Catapult. <b>Project: Adding Animation previous work</b>  | <i>TBA</i> |
| Chapter 9: More Animation!                                  | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Skeletons and Kinematics, Skeletons: The Hand, Inverse Kinematics, Basic Relationships: Constraints, Basic Relationships: Set-Driven Keys, Application: Rigging the Locomotive. <b>Project: Adding Animation previous work</b>   | <i>TBA</i> |
| Chapter 9: More Animation!                                  | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Skeletons and Kinematics, Skeletons: The Hand, Inverse Kinematics, Basic Relationships: Constraints, Basic Relationships: Set-Driven Keys, Application: Rigging the Locomotive. <b>Project: Adding Animation previous work</b>   | <i>TBA</i> |
| Chapter 10: Maya  | Read entire chapter and  | Basic Lighting Concepts, Maya Lights, Light Linking, Adding  | <i>TBA</i> |

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| Lighting.                              | write Synopsis and do chapter project, Submit to Blackboard.                         | Shadows, Raytracing Soft Shadows, mental ray Lighting, mental ray Physical Sun and Sky, Lighting Effects, Lighting the Decorative Box, Further Lighting Practice, Tips for Using and Animating Lights   |            |
| Chapter 10: Maya Lighting.             | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Basic Lighting Concepts, Maya Lights, Light Linking, Adding Shadows, Raytracing Soft Shadows, mental ray Lighting, mental ray Physical Sun and Sky, Lighting Effects, Lighting the Decorative Box, Further Lighting Practice, Tips for Using and Animating Lights                 | <i>TBA</i> |
| Chapter 11: Maya Rendering.            | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Rendering Setup, Previewing Your Render: The Render View Window, Reflections and Refractions, Using Cameras, Motion Blur, Batch Rendering, Rendering the Wine Bottle, mental ray for Maya, Render Layers, Final Gather, Ambient Occlusion, HDRI, Rendering the Decorative Box     |            |
| Chapter 11: Maya Rendering.            | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | Rendering Setup, Previewing Your Render: The Render View Window, Reflections and Refractions, Using Cameras, Motion Blur, Batch Rendering, Rendering the Wine Bottle, mental ray for Maya, Render Layers, Final Gather, Ambient Occlusion, HDRI, Rendering the Decorative Box     |            |
| Chapter 12: Maya Dynamics and Effects. | Read entire chapter and write Synopsis and do chapter project, Submit to Blackboard. | An Overview of Dynamics and Maya Nucleus, Rigid and Soft Dynamic Bodies, Animating with Dynamics: The Pool Table, nParticle Dynamics, Emitting nParticles, Animating a Particle Effect: Locomotive Steam, Introduction to Paint Effects, Toon Shading, Where Do You Go from Here? |            |