



# Southern California Regional Occupational Center

## COURSE SYLLABUS

**COURSE TITLE:** 3D Character Design & Animation  
**COURSE#:** 658  
**INSTRUCTOR:** Robert Schuchman  
**EMAIL:** Bob@schuchman.com  
**TIME:** Monday-Wed 12:45-3:45  
**LOCATION:** SoCal ROC - Room B-201  
**BOOKS/SUPPLIES:** **Optional- Thumb drive if you want to save copies of your projects. Note the software used in this course, 3DS Max, is available free for students at www.autodesk.com. It is recommended that you download and install this on your home system.**

**COURSE LENGTH:** One semester - 108 Classroom Hours

**COURSE DESCRIPTION:** This semester class will cover the creation of 3D characters for use in film, video games, simulations and illustration. Primary program: 3DS Max. Adobe PhotoShop, Illustrator and After Effects are taught as support programs.

**LEARNING OBJECTIVES:**

1. Develop a working knowledge of 3D Max and Sculptris
2. Understand fundamentals of vertebrate anatomy
3. Communicate using 3D terminology
4. Model various categories of characters.
5. Maintain a complete filing of system of all projects
6. Present projects in a professional manner as an assembled "Reel".

**ASSIGNMENTS:**

1. Organic Character Portrait using Sculptris
2. Mech Character using 3D Max
3. Organic Full Figure using 3D Max and Sculptris.
4. Anthropomorphized Character
6. CAT Animations. Walking, Jumping, etc.
7. Portfolio.

**GRADING:** A midterm grade will be given based on the current overall quality of your work. The final grade will be based on the quality of your reel/portfolio.

**CERTIFICATES:**

Students earning a grade of A or B earn a Certificate of Competency  
 Students earning a grade of C will earn a Certificate of Completion  
 Students earning a grade of D will earn no certificate

**ATTENDANCE:** Attendance effects the grade of the student as follows:

**NOTE: IF YOU MISS MORE THAN 6 DAYS YOU CAN NOT PASS THIS CLASS.**  
**NOTE: IF YOU MISS 4 DAYS" IN A ROW", YOU WILL PROBABLY BE DROPPED.**

**CLASSROOM RULES OF CONDUCT:** See SoCal ROC Classroom Rules Handout

Print Student's Name

Student Signature

Date

Print Parent's Name

Parent's Signature

Date

## COURSE ASSIGNMENTS - 3D Character Design

**WEEK 1** - Classroom rules and procedures (see handouts).  
Intro to Using Sculptris

- Creature face using Sculptris

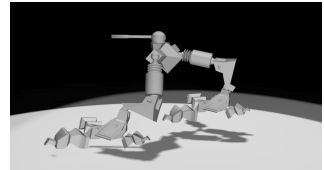


**WEEK 2** - Modeling Creature Face (Cont)

- Creature face using Sculptris

**WEEK 3** - Intro to Using 3D Max

- Modeling a Mech and Attaching a CAT Rig.



**WEEK 4** - High Poly Figure Combining 3D Max and Sculptris

- Modeling a full figure - Roughing in 3D Max and finishing in Sculptris.

**WEEK 5** - Low Poly - Game Ready Character

- Anthropomorphized Animal/Creature using 3D Max.



**WEEK 6** - Using CAT

- Animating CAT Figures - Various actions



**WEEKS 7 - 19** - Portfolio: Your portfolio is the assemblage of all your work. During these weeks you will perfect the previous assignments. Learn how to light, set cameras and render the assignments. You will learn to use a program called AfterEffects to assemble all your assignments together and add music and titles and contact information.



**Last. There's nothing in this course worthy of anxiety. The software may seem confusing at first but after a short time it will all become clear. If your attendance is good and you try your best, you will pass the class.**

**Most important, have fun and be creative.**

## **Course Objectives: Upon completion of this course, the student will be able to:**

1. Demonstrate importance of reading, writing, listening & speaking.
2. Demonstrate critical thinking and problem solving skills.
3. Demonstrate practice of workplace health and safety laws.
4. Demonstrate self-management, positive work ethics, and personal integrity.
5. Demonstrate collaboration, teamwork, conflict resolution, and leadership skills.
6. Demonstrate a working knowledge of appropriate technological tool.
7. Demonstrate understanding of class goals, objectives, guidelines, and careers.
8. Possess knowledge of basic 3D modeling tool set.
9. Use appropriate modifiers to create characters.
10. Model simple organic characters using box modeling techniques.
11. Model simple characters using hi poly organic modeling application.
12. Understand basic vertebrate anatomy and character stances.
13. Model simple non-organic (mecha, robots etc.) using appropriate techniques.
14. Create facial animation using morph targets.
15. Create hair and fur using various modifiers.
16. Use textures for character design.
17. Apply materials using uvw maps.
18. Animate characters using simple key frame techniques.
19. Rig characters.
20. Attach motion capture files to characters.
21. Use lights and camera to render characters.
22. Understand common rendering file types - Tif, JPEG, etc..
23. Assemble a portfolio/reel of characters designs
24. Possess knowledge of character design and animation terms.

## **SoCal ROC SLO's (Student Learning Objectives)**

### **1.Students will develop and execute a multi-year career plan by:**

- Understanding Career Pathways
- Identifying a career area of focus
- Enrolling in a course within a Career Pathway
- Demonstrating job specific skills/competencies necessary to attain a course certificate
- Developing job readiness skills
- Pursuing training to advance in a Career Pathway

### **2.Students will demonstrate professional behavior in the workplace by:**

- Communicating effectively
- Demonstrating leadership qualities that contribute to the organization
- Effectively managing time
- Building professional relationships through collaboration & teamwork
- Thinking critically/solving problems
- Dressing appropriately for a career
- Demonstrating flexibility, resiliency, and perseverance

### **3.Students will anticipate and adjust to ongoing economic and workforce trends by:**

- Demonstrating entrepreneurial characteristics
- Demonstrating technological literacy
- Being resourceful and innovative
- Using resources to acquire knowledge
- Setting priorities and adapting as priorities change

### **4.Students will understand and demonstrate ethical and legal behavior by:**

- Understanding and complying with all school rules and workplace regulations
- Treating all people with respect
- Demonstrating appreciation for cultural diversity
- Demonstrating honesty and integrity
- Demonstrating responsibility and accountability in fulfilling community and workplace roles