

Instructor: Gary Faigin

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Tues + Thurs: June 25 to July 23, 2019 (5 weeks)

**Prerequisite: No prior Maya experience is required.**

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This 8-session summer class, taught by Gary Faigin, author of *“The Artist’s Complete Guide to Facial Expression,”* trains students in the basics of facial expression, and how to create those expressions on a CG facial model that has been rigged using Faigin’s input. Each class includes a lecture on the principles of expression featuring Faigin demonstrating while drawing on his digital pad, followed by complementary digital demonstrations by the TA, an experienced animator using the software program Maya - standard in the animation industry. Due to UW summer calendar challenges, we will need to schedule two extra class sessions at non-standard times; we’ll do this when we meet during our first class.

Students are introduced to the individual muscles of expression, and shown how to combine those individual muscle movements to create the six cardinal expressions of joy, anger, sadness, fear, surprise, and disgust. Students also pose the various muscle movements reflecting their own faces in a hand mirror, and rendering the poses and expressions in CG. All student renderings are also reviewed in class, allowing students to correct their expressions, as necessary. Students spend time each week in the computer lab working under the supervision of the class TA who is an experienced alumnus from UW’s own Capstone animation program. For extra credit, students may complete one of two out-of-class assignments, as outlined in the final July 23 class session of this Syllabus.

Reference is also made to recent research on facial expression, based on Faigin’s participation in the Facial Expression Research Group (FERG) which, together with the Animation Capstone, is housed in the Animation Research Labs (ARL) at UW. This class is ideal for anyone interested in animation, game design, or mastering the basics of the expressive face, as well as those seeking a hands-on introduction to Maya.

## CLASS READING & MATERIALS LIST

**CLASS TEXTBOOK** – ‘The Artists Complete Guide to Facial Expression’ © 1990, by Gary Faigin, available at the University Bookstore or online at [www.amazon.com](http://www.amazon.com)

**FAIGIN FACE BLOG** – <http://www.FaiginVFX.com/face-blog> & <http://www.garyfaigin.com/faigin-face-blog> - please review before class begins.

**STUDENT RESOURCE FOR OPTIONAL ASSIGNMENT:** [www.onanimation.com](http://www.onanimation.com)

## CSE 464 - Facial Expression Creation For Animation COURSE SYLLABUS

### CLASS #1: INTRO TO FACIAL EXPRESSION;

#### MOVEMENTS OF THE UPPER FACE      June 25, 2019

1. Introduction to facial expression - Why it's important, how it's universal, and examples from art and photojournalism.
2. Recent research on human expression and what it tells us.
3. How facial muscles work; active areas of the face.

#### THE EYES & BROW

- Neutral eyes and eyebrows
- Position of the Lids: opening the upper eyelid; raising the lower lid; the squint
- Rotation of the eye
- Muscles of the Brow: eyebrow raiser
- Introduction to Maya

*Assignment #1: Posing the Muscle Movements around the Eye (Part #1). Due Class #2.*

### CLASS #2: MOVEMENTS OF THE UPPER FACE (Cont.)

*Review of Assignment from Class #1: Posing the Muscle Movements around the Eye (Part #1)*

#### THE UPPER FACE MUSCLES (Cont):

- The Scowl
- The Glare
- The Brow of Distress

*Assignment #2: Posing the Muscle Movements around the Eye (Part #2). Due Class #3.*

### CLASS #3: MOVEMENTS OF THE MOUTH (Part 1)

*Review of Assignment from Class #2: Posing the Muscle Movements around the Eye (Part #2)*

#### THE CLOSED MOUTH

- Sneering Muscle
- Smiling Muscle

- Frowning Muscle
- Lip Tightener
- Pouting Muscle

*Assignment #3: Posing the closed-mouth movements. Due Class #5.*

## **CLASS #4: MOVEMENTS OF THE MOUTH (Part 2) (Wednesday)**

### **THE OPEN MOUTH**

- Open Mouth - relaxed
- Lower Lip Stretcher
- Snarl/ Disgust
- Smile

*Assignment #4: Posing open-mouth movements. Due Class #5.*

## **CLASS #5: THE CARDINAL EXPRESSIONS—SURPRISE and FEAR**

*Review of Assignment from Class #3 and Class #4: Posing open-mouth movements and posing closed-mouth movements.*

### **SURPRISE and FEAR**

- Posing expressions – coordinating eyes and mouth; levels of intensity
- The difference between Surprise and Fear
- Posing Surprise
- Posing Fear

*Assignment #5: Posing Surprise and Fear. Due Class #6.*

## **CLASS #6: THE CARDINAL EXPRESSIONS—SADNESS**

*Review of Assignment from Class #5: Posing Surprise and Fear*

### **SADNESS**

- The basics of Sadness – Crying vs. merely Sad
- Posing Crying
- Posing Sadness
- Various degrees of Sadness

*Assignment #6: Posing Sadness. Due Class #7.*

## **CLASS #7: THE CARDINAL EXPRESSIONS—ANGER**

*Review of Assignment from Class #6: Posing Sadness*

### **ANGER**

- The basics of Anger – starts with the eye
- Closed-mouth Anger – various levels of intensity
- Open-mouth Anger – variety of mouth positions

*Assignment #7: Posing Anger. Due Class #8.*

## **CLASS #8: THE CARDINAL EXPRESSIONS—DISGUST and JOY**

*Review of Assignment from Class #7: Posing Anger*

### **DISGUST and JOY**

- The basics of Disgust – the 3 active areas
- Posing Disgust – open mouth
- The basics of Joy – eye/mouth agreement
- Posing the closed-mouth Smile

### **JOY**

- The broad Smile
- The Laugh
- Varieties of the Smile: sly, bittersweet, eager & fake

*Assignment #8: Posing Disgust and the Closed-mouth Smile. Due Class #9.*

*Assignment #9: Posing varieties of the smile & laugh; finding expressions on the web. Due Class #9*

## **CLASS #9: FINAL REVIEW**

**Tuesday 7/23/19**

*Review of final Assignment #9: Smile & Laugh, and Assignment #8 Posing Disgust and the Closed-mouth Smile.*

Today we have our final review of material covered, our final critique and course summary.

## LEARNING OUTCOMES

1. Students learn the basics of how to pose various movements of the face in Maya using a pre-rigged model.
2. Students learn the individual components of facial expression and how to pose them on their own face and render them in Maya.
3. Students learn the criteria to create a resting face with no apparent expression in Maya.
4. Students learn to pose convincing and accurate versions of the six cardinal facial expressions in Maya.
5. Students learn to pose certain expressions in varying degrees of intensity in Maya.

## STUDENT ASSESSMENT

1. Student grade will be based on successful completion of weekly class Assignments.
2. Maximum points per class Assignment: 40 points.
3. Attendance is worth 40 points, the equivalent of one assignment.

<b>GRADING RUBRIC for “ Mastering Facial Expressions in CG”</b>				
	<b>Exemplary</b> 40 points	<b>Accomplished</b> 30 points	<b>Developing</b> 20 points	<b>Beginning</b> 10 points
<b>Weekly Assignments:</b> Rendering of facial movements and expression	Assignment is complete and <b>done extremely well.</b> Required facial movement or expression is clear and accurate. Emotions are recognizable and non-ambiguous.	Assignment is complete. Requested facial movement or expression meets general criteria. Emotions are recognizable but not un-ambiguous.	Assignment is complete. Required facial movement or expression is just adequate. Emotions are barely recognizable and/or face contains unrealistic artifacts.	Assignment is incomplete. Required facial movement or expression does not meet general criteria. Emotions are not clearly recognizable.
<b>Notes:</b>				
<ol style="list-style-type: none"> <li>1. Students are required to upload weekly class Assignments before midnight the day before each class to the designated web address.</li> <li>2. If an assignment is late there will be a 10% deduction every class day.</li> <li>3. Students may choose to re-submit any completed Assignment on a one-time basis for review and higher grade. All re-dos must be re-submitted no later than July 24. No exceptions.</li> </ol>				

