Dynamic Media I: Motion Graphics and Digital Effects
Th 9:00-11:50 a.m. Rm. 212

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Students in this class will learn to create compelling images, using specific theoretical and software techniques through instruction and individual practice.

The course is structured through demonstration as well as through in class and outside of class home-work. Ultimately this class will culminate in the production of a time based final project, using the skills learned during the course of the year. It will require outside effort and, in addition, will require use of tools such as After Effects, Commotion, Photoshop, Illustrator, Final Cut, Maya, and 3Dstudio.

This is not a technical After Effects course, rather, the purpose of this class is to give students a full understanding of the specific theory and ideas which come into play with time based visual imagery as well as give students the specific technical training to create compelling content. In addition, students will be asked to begin thinking like artists to pursue their own aesthetic sense.

Attendance/Homework/Grading Policy:

Attendance:
Attendance is absolutely important in this course. If you have three unauthorized absences you will fail the course. Authorized absences can only include such things as sickness or family emergency.

Homework:
Homework will be given on a weekly or biweekly basis. It will directly reflect upon what is covered in class but will encourage that the student investigating issues more deeply than dealt with in the classroom.

This is a challenging course and you will be spending at least 20 hours/week on homework.

Backups:
All project work completed over the course of each semester must be archived. SVA servers are not a reliable place to store data and may be deleted. As a result, it is recommended that students purchase a portable firewire drive or make frequent CD/DVD burns. Please note that excuses for missing homework will not be accepted.

It is the student's responsibility to keep up to date with the class, both in terms of homework assignments given and weekly
topics. In most circumstances I will not cover material more than once.

Grading:
50% grading of weekly assignments
30% final assignment
20% attendance

Reference Materials:

After Effects in Production: A Companion for Creating Motion Graphics, Cris Meyer (3rd edition)
Creating Motion Graphics with After Effects, Trish and Cris Meyer (3rd edition)

APPROPRIATE STOCK LIBRARIES:
www.imageafter.com

FOUNDATIONS:
web references:
creativecow.com

highend3d.com
nycmg.org

Class #1:
Web:
www.adbusters.org
video.google.com
http://www.uiowa.edu/commstud/adclass/camel/JoeCool.html
http://www.thetruth.com/
www.chelsea.com (simon blake)

Theory:
What is the difference between Art and Design?
What is the purpose of advertisement?
How do advertisers get people to buy their products-what specific strategies or tools do they use?
How does advertising influence behavior?

Technique:
Understanding digital workflow
Files coming in—Files coming out
An Introduction to timebased thinking
Terminology+Video standards
Introduction to keyframing and effects
A crash course in rendering

Homework:
Read:
CMG, ch. 21+ ch. 27

Do:
Students will look online at video.google.com(or anywhere)and choose an advertisement which you can show in class. You will critique and look for what specific elements persuade the audience to buy the product. Examine both the idea of the advertisement as well as the use of visual seduction. Would you buy the product based on what you see?
Come to the next class with a short written evaluation of the video that you've chosen, thinking about visual style, the covert message, and anything else that makes the ad successful.

Design as persuasion-After completing part one, students will conceptualize a short (30 second) piece using only images (no words or any audio except ambient audio) to create an engaging visual narrative with a specific persuasive theme and visual style. Arrive to next class with both your initial storyboard ideas and a completed piece. Use any specific artist tool you'd like to use including pencil, paper, photography, scanned imagery, or other items.

Format is HD (1920x1080, 29.9fps) at least 30 seconds

Class #2:
Web:
http://www.aiga.org/
http://www.aiga.org/resources/content/1/7/3/images/designis_en.mpg
http://www.adobe.com/designcenter/

Theory:
A crash course in visual thinking
How to develop your own design style

Technique:
Understanding color (and digital color)
Creating Compositions/ Importing Footage Files
Interpreting footage (alpha channels)
Understanding Alpha channels (how to use them and how to make them)

Modifying size, time, and other options within a composition.
An introduction to Audio

Homework:
Read:
Pixel Cinematography, Introduction part 3 (pg. 12-24)
CMG, ch. 1+22

Do:
In addition, arrive to next class with a piece of visual art of your own which illustrates your personal style and aesthetic. Be prepared to talk about the work and explain what specific aspects of the work influence your style. What mark do you make that no one else can make?

Using the art work, make a series of five abstract design ideas which visually show your personal style. These must be print resolution 6x8" but can be any medium (including analog mediums such as colored pencil, photography, or painting).

In addition, arrive to next class with an initial storyboard and set of concept art which documents what you're planning for your final project for the semester. Remember that this project will be completed over the semester and will be a large undertaking. Think ahead and choose wisely what you're like to pursue.

Class #3:

INITIAL PROJECT IDEA DUE

Web:
www.eyeballnyc.com (nike)
http://en.wikipedia.org/wiki/Rastor
http://en.wikipedia.org/wiki/Vector_graphics

Theory:
What is a Vector?
What is a Rastor?
How Scale can affect images

Technique:
Photoshop and Illustrator in action
Nesting/Precompose/
Nesting composition (node based production)

Homework:
Read:
CMG, ch. 2+3

Do:
Take a look at eyeball's Nike campaign. Notice how this simple ad uses two basic ideas with cropped and masked still photography and scale changes (things getting closer to the camera) instead of full motion animation.

This week's assignment will be to make a short film using only vector and rastor files. You will use a still camera to capture a digital library of images, use any method (including scissors) to crop and mask footage items, and create animation through translations, scale, or image sequence swaps (think south park or other simple 2d animation).

Format is HD (1920x1080, 29.9fps) at least 30 seconds

Class #4:
Web:
http://www.psyop.tv/main.php (look for Bombay under platinum select)
http://www.andreas.com/hokusai.html

Theory:
Introduction to 3D
Understanding Z depth

Technique:
Quick tips to help see in 3d (the grid trick)
A comparison: Maya vs. After Effects
After Effects 2.5D
Introduction to 3d camera
Introduction to lighting
Material Properties
Null objects

Homework:
Read:
Understanding 3d, pg 3-8
CMG, ch. 17

Do:
Research the visual style of Hokusai and the visual style of Psyop. In terms of advertisement and design think about how Psyop is trying to persuade you to buy the products they're representing. Using both of these design influences as a starting point, make a short 30 second (or longer) piece which accurately reflects both ideas.

Format is HD (1920x1080, 29.9fps) at least 30 seconds

Class #5:

Theory:
An Introduction to Compositing
What makes an image look real?
What is MultiPass rendering?

Technique:
Rendering in 2d
- Render Order
- Values+Compression types and codecs

Motion Blurring/shutter angles
Using Transfer modes and render passes to make a composite

Rendering in 3d
A Focus on global illumination (domelight and key light)
Matching real world lighting
3d output

Homework:
Read:
CMG, ch. 19

View:
Rendering and Compositing for Digital Sets

Do:
This week's homework assignment deals specifically with global illumination lighting and render passes from 3d to 2d composite. Using a photograph of a specific building (HD quality), students will build a complete 3d object (box modeled poly method or other) to match the buildings in the site. Note, the model can simply be geometry and doesn't need to have textures and can be a grey blinn or flat colored. Once this has been completed students will build a simple mental ray GI rig (dome and key) and output a global illumination HD quality multipass single frame. Bring these frames into 2d and build a composite which layers all the elements for a final image.

Format is HD (1920x1080, 29.9fps)-single frame
Arrive to class with the image and the site photograph.

COMPOSITING: An act of image subversion
web reference:
belief.com
cafefx.com
charlex.com
imaginaryforces.com
rezn8.com
rhinofx.com
spon.com

Topics:
Layering imagery and seamless integration

Class #6:
Web:
http://en.wikipedia.org/wiki/Hyperreality
http://video.google.com/videoplay?docid=8369356292081076830&q=ufo

Theory:
What is reality? (is it what we see?)
Digital reality vs. real reality? (which one is more real?)
Are fashion models really that beautiful?

Technique:
Compositing 101
Understanding perspective
Understanding light (why shadows are important)

An Intro to Color Correction
Aliasing is your enemy
Working with Photoshop
Tools for seamless image creation (clone, masks, etc…)
Using Photoshop as a design tool (importing compositions)

Homework:
Read:
CMG, ch. 8

Do:
Using a large format digital camera, students will shoot a specific site. Make sure to take additional documentation of where the light is coming from, what time of day it is, what is the weather like. Students will build a complete 3d object (box modeled poly method or other) to insert into the site. Make sure to create concept art to support your design.

The goal of this project will be to seamlessly composite the 3d model into the 2d background (the photo of the site). Following up on last week's assignment, students will build a GI rig (dome and key) and output a global illumination HD quality multipass single frame, bring this image into 2d and create a seamless composite.

Format is HD (1920x1080, 29.9fps)-single frame
Arrive to class with the image and concept art (300dpi).

Class #7:
Theory:
Methods to control transparency-
A vector vs. rastor approach

Techniques:
Vector Editing
Masks and Transparency I
Techniques for Importing masks
Drawing masks using freeform tools
Animating Freeform masks over time

Homework:
Read:
CMG, ch. 7 (the distort section will help with this weeks homework)

Do:
One common approach to working with vectors is to use masks to reveal an image on top of another image. Your homework assignment for this week will use this basic premise and will involve tattoos and human skin. The goal of this weeks project will be to use a digital camera or stock footage library to build a database of interesting tattoos. If you're exceptionally interested, feel free to make your tattoos as digital files (as long as they're photoreal). Use a digital video camera to capture appropriate footage and composite the tattoos onto the skin as they're being drawn.

Format is HD (1920x1080, 29.9fps) at least 30 seconds

Class #8:
Theory:
RotoHell

Techniques:
Vector Editing
Masks and Transparency II
Rotoscoping
Masking complex characters

Homework:
Do:
Using a digital video camera (on a tripod), film yourself as if you're interacting with another person. Do this from the perspective of both characters. The goal of this week's assignment is to create a convincing movie which shows two of "you", interacting in a seamless manner.

Class #9:
Theory:
Image based transparency
Using color or parts of an image to control what you see

Technique:
Rastor editing
An Introduction to Keying-controlling transparency through specific colors
Why is it always blue or green?
From Simple to Complex
Lighting for a Key

A quick introduction to the bluescreen room and the keying pipeline

Homework:
Read:
CMG, ch. 10

Do:
Digital Sets and compositing. This week's assignment is as follows: Create a cast of sock puppet characters, complete with hair, facial features, and clothing. You may use as much or as little detail as you'd like. Using a piece of colored cardboard as a background (if you're using blue, make sure that your socks are not blue as well), film a scripted :30 second blue screened sequence (using the cardboard for blue screen). Please pay attention to the lighting of your sock puppets and blue screens as inconsistencies will make the blue screen fail.

Next, students will create a basic digital set in 3d. Don't worry about texture or exceptional detail but the modeling should look as real as possible. Using GI students will render out a static Background plate of the "set" and composite the sock puppets into the set. Extra attention should be paid to attention to details such as graphic overlays and other elements.

MOTION GRAPHICS: Art+Motion=Fun
web reference:
brandnewschool.com
eyeballnyc.com
http://fueldesign.com/
http://www.massmarket.tv/
mk12.com
niceshoes.com
psyop.tv

Topics:

Understanding Animation
An Introduction to time based thinking

Class #10:
Theory:
Animation I
Principles of Animation

Technique:
Animation I
- Layer properties
- Keyframes + keyframe types
- Motion paths

Interpolation
- Value graphs+speed

Homework:
Read:
CMG, ch. 5

Do:
Create an animated movie consisting of a basketball, a basketball hoop, and a basketball net . Animate the basketball shooting into the basket (bonus points for adding sound), bouncing off the parquet, and rolling to a stop (towards the camera- in other words the ball will get larger as it gets closer

For extra credit you will build a simple 3d environment (basketball court) in Maya, light with Mental Ray and render for use as background plates/still frame. In addition, you will use the treated basketball footage and composite this into the scene for additional visual complexity. The project is intended for "The Final Four" so a logo treatment would be nice too.

Class #11:
Web:
http://animationcollective.com/
http://flickerlab.com/

Theory:
Animation II
Animation-organic character animation
Character Design for animation
Character Animation Workflow

Technique:
Setting up the character for animation purposes
2d Rigging and Character Design
The point of good parenting
Walk Cycle Animation

Homework:
Do:
Storyboard and write a short 30 second to 1 minute short film. It's important to make the piece something simple, has a few main characters, and involves realistic scenarios. Make concept art for the characters and create animated elements in 2d (photoshop, etc). Bring these items into AE and create motion.

Arrive to class with storyboards, concept art, and finished piece.
Format is HD (1920x1080, 29.9fps)

Class #12:
Web:
www.trapcode.com

Theory:
Animation III
An Introduction to lipsynch

Technique:
AE: Lip Synch
AE: The Talker Plugin and Soundkeys
Integrating animated heads into character animation (using Nested comps)

Homework:
Do:
Using a background clip taken from any movie source which involves dialogue between two character (must be :15 seconds long at least, drawn the characters in a new style and create a 15 second animation which mimics both the animation style and dialogue of the initial clip, Use any style you're interested in using as long as it looks good.

Arrive to class with initial clip and finished piece.
Format is HD (1920x1080, 29.9fps), at least 15 seconds

Class #13:
Web:
http://wip.warnerbros.com/ascannerdarkly/
http://www.wakinglifemovie.com/

Theory:
Introduction to Painting
Animation is what moves and what doesn't
Painting in Photoshop vs. painting in After Effects

Technique:
AE 6.0 Paint Layers
Vector Paint for animation
Filmstrip and the Wacom

Homework:
Read:
CMG, ch 4.

Do:
Using last week's story idea, students will shoot (HD) and edit to create a live action finished video. Using this video as a starting point, students will use painting techniques to create a nonphotoreal look. Feel free to use any 2d program you'd like or hand draw over frames. The end result will be an image that feels like a drawing but has realistic animation and camera movements.

Arrive to class with initial video and finished piece.
Format is HD (1920x1080, 29.9fps)

Class #14:
In class work period

Homework:
Final project production

Class#15:
Final project due.

FINAL PROJECT (30% of your final grade):

The final project for the semester will be to create a self directed time based piece. The scope of the project will be large including pre-production storyboards, initial concept sketches, and a final movie. The format, in terms of software and technique, is open to individual interpretation but must be consistent with the style set forth in the initial concept art. You will be responsible for collecting all source footage, image creation (2d or 3d), video as well as audio.