

CTAN 508L - Live Action Integration with Visual Effects

Class Dates/Times : Thursdays @ 7pm-10pm

Robert Nederhorst

Adjunct Faculty

robert.nederhorst@usc.edu

<http://throb.net>

Student Assistant: Amy Lee amywlee@usc.edu

Course Description:

This course will survey the tools and techniques to successfully marry live action shooting with CGI elements and process screen footage. It will be applicable for both film production and animation students which intend to utilize visual effects in their work. With an emphasis on 2D compositing, issues and techniques will be taught working with combinations of elements such as HD background plates, film plates, 3D CGI elements, and green screen performances. Issues will range from on-set visual effects protocol, match-moving of CGI, to final compositing technique. Each student will produce representative shots illustrating the techniques learned. In addition, developing one's eye and judgment for good visual effects work will be a recurring theme throughout the class.

Course Credits : 2

Prerequisites: CTAN 462, Visual Effects, or CTAN 464L, Digital Lighting and Rendering, or CTAN 452, Introduction to 3D Animation

Course Length: 15 weeks, meeting once a week. Three hours each class meeting, totaling 45 hours total instruction.

Hard Drive Required: 500GB, 7200rpm, firewire400 interface, either 2.5" or 3.5" form factor. RAID0/eSata interface recommended.

Optional Books: <http://url.throb.net/nukebook>

Optional Educational DVD's:

"Introduction to Nuke Compositing", Rob Nederhorst, The Gnomon Workshop, 2005.

"Nuke Compositing in Production", Rob Nederhorst, The Gnomon Workshop, 2005.

Software Used: Foundry Nuke 6, Autodesk Maya 2011 (minimal), Tracking software (minimal)

Grading Breakdown:

Participation/Adhering to Naming Conventions @ 20%

Weekly Assignments @ 40%

Final Project @ 40%

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Class Schedule: (Dates are the first day of the week)

Week 1: (Jan 9)

Introduction to Class Goals Discussion about "what it means to be a compositor"

Review of Class Project(s) and how we will be rendering, etc

Comparing Nuke to After Effects

Overview of Foundry Nuke

Formats in Video and Film

Color Space/Lin/Log Format

Image Channels

EXR Format

Naming Conventions (important!)

Class Exercise: Examine Various Samples of Image Formats in Nuke. Assignment:

Acquaint Yourself to Nuke UI, Watch QT Movs.

Week 2 : (Jan 16) - Class on the 19th : VFX BAKE OFF!!!

Every year the Visual Effects Branch of the Academy nominates films for the Visual Effects Oscar. Every year there is a bake-off of the 10 potential films to whittle them down to the ones that will be suggested to the entire Academy to vote on (total of 5).

<http://www.deadline.com/2012/01/oscars-vfx-shortlist-pared-to-10/>

This is an off-site class located at :

<http://url.throb.net/bakeoff-map>

8949 Wilshire Boulevard (yes it's the black glass building you see in Google maps)

Beverly Hills, CA 90211-1907

About the show :

The show starts at 7pm BUT it will fill up. There are no guaranteed seats. I suggest getting there around 6-615 and getting in line. Yes the line can be long.

Parking Info:

There is parking at the garage at La Peer but that closes at midnight (I have nearly been locked in). There is street parking south of Charleville which won't close :)

Assignment : Write a quick summation of the bake off and which films (5) you feel will be nominated and which one will ultimately win. Also note the presentation style and give your comment on the favorite of the night and why. Most importantly, get inspired!

Additional Assignment : *Continue Exploring Nuke UI, Watch QT Movs.*

Week 3: (Jan 23)

Walkthrough of production composite (SAAB)

Assignment : reproduce production composite

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Week 4: (Jan 30)

Review of assignment

Refine production composite (goal is to make sure there is an understanding of taking a shot to final)

Assignment : one more go at production composite

Week 5: (Feb 6)

Walkthrough of larger film production composite (Priest)

Understand laying methodology

Build Lens flares

Showcase lens distortion

See tricks used to finalize the shot

Assignment : reproduce production composite

Week 6: (Feb 13)

Review of assignment

Refine production composite (take the shot to final!)

Assignment : one more go at production composite (make it look great!)

Week 7: (Feb 20)

Review of assignment

Refine if needed

Intro to keying with Nuke

Assignment : keying exercise

Week 8 : (Feb 27)

Review of assignment

Refine if needed

Walkthrough of keying and production composite utilizing Nuke 3d system (Solomon's)

Assignment : reproduce production composite

Week 9 : (Mar 5)

Review of assignment

Refine if needed

Introduction to tracking and stabilization with Nuke 3d tracker

Assignment : track and stabilize footage

Mar 12-17 (Spring Break!!!!)

Week 9 : (Mar 19)

Review of assignment

Refine if needed

Sky replacement techniques for assignment

Assignment : replace sky into stabilized footage

Week 10 : (Mar 26)

Review of assignment

Introduction of Mocha software

Walkthrough of Samsara shots for simple compositing techniques that are bread and butter work.

Assignments : reproduce production shot(s) and investigate better ways to do this work

Week 11: (Apr 2)

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Review of assignment(s)

Intro to production composite for Archetype

Showcase multipass compositing and gizmo creation

Show how to make a cleanplate and roto existing foreground in

Assignment : assemble basic Archetype comp

Week 12: (Apr 9)

Review of assignment

Talk about shot finishing and look at detail work needed to take the shot to final

Intro to final project

Assignment : track final project footage and place rough geo, find elements

Week 13: (Apr 16)

Review of assignment

Review of projection in Nuke 3D system

Review of current non CTAN508 work if students require help

Final Project Assignment : create matte painting and project onto created/placed geo

Week 14: (Apr 23)

Review of assignment

Walk through of how to place elements in comps and how to composite them for maximum effectiveness

In class work of placing elements

Review of current non CTAN508 work if students require help

Final Project Assignment : continue placing elements

Week 15: (Apr 30)

Review of assignment (this is the final shot!!!)

Talk about the business of VFX and how it pertains to work

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STUDENTS WITH DISABILITIES: Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure that the letter is delivered to the Professor as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

MISSING AN EXAM, INCOMPLETES: The only acceptable excuses for missing an exam or taking an incomplete in the course are personal illness or a family emergency. Students must inform the professor before the exam and present verifiable evidence in order for a make-up to be scheduled. Students who wish to take incompletes must also present documentation of the problem to the instructor or teaching assistant before final grades are due.

ACADEMIC INTEGRITY: USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/dept/publications/SCAMPUS/gov/> . Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/> .