FILM-2380: VISUAL EFFECTS

Cuyahoga Community College

Viewing: FILM-2380 : Visual Effects

Board of Trustees:

January 2020

Academic Term:

Fall 2020

Subject Code

FILM - Film and Media Arts

Course Number:

2380

Title:

Visual Effects

Catalog Description:

Focus on planning, producing and editing visual effects for film and media productions. Digitally combine multiple motion and graphic sources to create convincing moving image composites. Emphasis on shot composition, matching lighting and color, focus, depth of field, camera angles and movement. Hands-on projects involve green screen filming, motion mattes, vector-based animation for mattes, titles and motion graphics, rotoscoping and digital painting.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

3

Requisites

Prerequisite and Corequisite

VCPH-1450 Digital Imaging I or FILM-1040 Imaging Basics For Film And Media Arts: On Location And In Studio.

Outcomes

Course Outcome(s):

Identify, analyze and discuss visual effects, special effects and compositing for video and film and the roles of people involved in these processes.

Objective(s):

1. Use appropriate visual and special effects terminology.
2. Compare and contrast acquisition formats used for visual effects.
3. Identify and discuss emerging technical developments and trends in digital video technology.
4. Describe the role visual effects and motion video compositing plays in television, film and interactive media environments.
5. Define the role of a visual effects supervisor.
6. Describe how practical special effects and production design integrate with visual effects.

Course Outcome(s):

Use compositing software to create layered compositions that create desired visual effects.

Objective(s):

1. Prepare video clips, photographic sources and graphics files for use in a video composite.
2. Develop and execute compositing effects using masking, track mattes, stencils, and rotoscoping.
3. Adjust and clean up a key using various software solutions.

4. Vary the playback speed of a video clip using time remapping.
5. Define and apply transfer modes to layered tracks.
6. Define technical issues surrounding formatting and rendering files such as "interpret footage", screen and pixel aspect rations, render queues, and compression formats.

Course Outcome(s):
Conceive, plan and execute production of separate visual elements that will be combined to form a photographically convincing image

Essential Learning Outcome Mapping:
Written Communication: Demonstrate effective written communication for an intended audience that follows genre/disciplinary conventions that reflect clarity, organization, and editing skills.

Objective(s):
1. Produce a shot list and story board for a video compositing project.
2. Effectively light and film a subject against a green screen for use in video compositing.
3. Create and animate basic computer-generated visual effects using keyframes and/or behaviors.

Methods of Evaluation:
1. Participation and discussion
2. Assignments and exercises
3. Written assignments
4. Case studies
5. Tests and quizzes
6. Reel (the video/film equivalent to a portfolio)

Course Content Outline:
1. Introduction to Special Effects (SFX), Visual Effects (VFX), and compositing the moving image
    a. VFX/SFX in film and television
    b. VFX/SFX on the web and other motion graphics environments
2. Review of core film terms and definitions
    a. Frame rates and screen aspect ratios
    b. Compositing applications
    c. Pixel aspect ratios
    d. Acquisition formats
3. Technical issues in Compositing
    a. Lighting and color
    b. Camera angles
    c. Continuity of visual elements
    d. Compression schemes and file formats
    e. Red, Green, Blue, and Alpha Channels
4. Pre-production planning
    a. Recording medium
    b. Shot list and storyboard
    c. Elements to be composited
    d. Relationship between the desired visual effect and the central stylistic themes
    e. Picture composition
5. Filming for Compositing
    a. Green/blue screen backgrounds
    b. Lighting for chroma keying
    c. Matching virtual and on-set camera angles
    d. Directing actors
    e. Creating sets for compositing
6. Generating non-filmed elements
    a. Matte painting
    b. Computer generated images, objects and actors
    c. Type and graphics

      d. Computer generated particle effects
         i. Fog or haze
         ii. Steam
         iii. Snow or rain
         iv. Smoke or fire
         v. Other atmospheric elements

7. Bringing assets into the compositing environment
    a. Importing video
    b. Scanning
8. Preparing elements
    a. Masks and mattes
    b. Keys
    c. Resolution and image quality
    d. Refining mattes and masks
9. Assembling the composite motion picture
    a. Layers
    b. Red, green, blue and alpha channels
    c. Compositions
10. Combining elements
    a. Blending images
       i. Transfer modes
       ii. Opacity
    b. Scale, position, and rotation
    c. Masking and feathering edges
11. Working with the timeline
    a. Making changes to elements over time
    b. Creating key frames
    c. Basic editing
    d. Time remapping
    e. Graph views
12. Managing digital compositions
    a. Grouping layers
    b. Nesting compositions
    c. Understanding how the computer will render (process) the layers
13. Applying computer generated effects
    a. Commonly used effects
    b. Custom designed effects
14. Output
    a. Render settings
    b. Generating movies for film, television, web, and multimedia
    c. Deliverables
       i. Image sequences
       ii. Distribution vs. master file formats.

Resources

Horak; Jan-Christopher. *Saul Bass: Anatomy of Film Design (Screen Classics).* 2014. The University Press of Kentucky, 2014.

Krasner, Jon. *Motion Graphic Design: Applied History and Aesthetics.* 3rd. Focal Press, 2013.

Resources Other

1. lynda.com or Linked in learning
2. artofthetitle.com
3. fxphd.com

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