

USD 233 – OLATHE DISTRICT SCHOOLS

Course Title: Match Moving & Integration

Credit: ½

Grade Level: 10, 11

Course Length: 1 Semester

Course Description:

Students will experience the process of creating their own elements and merging them with live action background plates. Using MAYA Live, students will explore compositing, match moving, camera tracking, production overview, real world camera attributes, depth of field, film grain, color correction, and film terminology.

Prerequisites: Intro to Dynamics/Dynamic Effects

Required Textbooks: Instructional Materials: Textbooks-Video Production Handbook, The Art and Science of Digital Compositing, Film Directing “Shot by Shot” visualizing from concept to screen.
Teacher designed mini projects, web site projects/lessons, software included lessons/tutorials/projects.

Instructional Strategies: Direct instruction, demonstration, graphic organizers, application exercises, projects, cooperative groups, case studies, guest speakers, DVD(s), videos, internet.

Assessments: Daily work performance, teacher observation, rubric, checklist, classroom discussion, projects, research relevant to topic, application performance, exams, conferencing, portfolio, written response, sketchbook, journaling, self evaluation.

Course Objectives:

- Learn appropriate Match Moving for specific purposes.
- Develop an understanding of storyboard structure.
- Learn to visualize your shots.
- Develop tracking strategies that show control of various solving attributes.
- Learn digital compositing to manipulate a combination of at least two source images to produce an integrated result
- Apply visual communications knowledge and skills to express ideas imaginatively.
- Use critical thinking, and problem solving to communicate ideas visually.
- Produce animations that demonstrate basic knowledge of expository and narrative communication processes and particle simulation.
- Develop skill in the use of techniques, procedures and matting techniques.
- Learn appropriate use of integration techniques to add impact and realism to a scene.

Course Content:

I. Introduction to Match Moving & Integration

- Match Moving
- Integration/Film
- Match Moving Technology/Development

II. Visualization

- Visualization
- Production Design
- Storyboards
- Visualization: Tools and Techniques
- The Production Cycle

III. Shots

- Camera Features
- Exposure
- Basics
- Composing
- Lighting
- Audio Techniques
- Backgrounds
- Editing

IV. Intro to Digital Compositing

- Visual Information
- Basic Image Manipulation
- Basic Image Compositing
- Matte Creation and Manipulation
- Time and Temporal Manipulations
- Image Tracking and Stabilization
- Formats: Media, Resolution, and Aspect Ratios
- Quality and Efficiency
- Creating Elements
- Integration Techniques
- Case Studies

V. Live

- Setting up shots
- Shot strategy
- Tracking

- Solving
- Fine tuning and corrections
- Reference
- Loading Live
- Live control panels
- Live menus
- Playback tools
- Loading images
- Setting up filmback and aspect ratios
- Setting up image cache
- Deinterlacing video shots
- Creating proxy images
- Choosing good points
- Constraint strategies
- Problematic shots
- Production tips
- Overall tracking workflow
- Tracking a point
- Evaluating a track point
- Correcting track failure
- Filtering track points for interlaced shots
- Reviewing the Track Summary
- Determining when you're ready to solve
- Track Display panel
- Track Options panel
- Importing track points
- Exporting track points
- Tracked point file format
- Overall solve workflow
- Running the solver
- How the solver computes a solution
- Evaluating a solution
- Reviewing the Locator Summary
- Improving solutions
- Choosing survey constraints
- Creating and modifying survey constraints
- Creating infinite and locked points
- Creating a focal length constraint
- Creating camera translation and rotation constraints
- Rendering a solution
- Exporting a solution
- Fine Tune task
- Corrective options

VI. Track and Solve/I

- Tracking preparation
 - Tracking object points in a shot
 - Evaluating the tracking of a point
 - Tracking additional points
 - Deleting tracking data
 - Importing tracking data
 - Preparing to solve
 - Solving the shot
 - Evaluating a solved solution
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- Importing additional tracking data

VII. Solving with Survey Data/II

- Creating a Distance constraint
- Creating a Plane constraint
- Registering a solution
- Creating additional Plane constraints
- Evaluating the solution with imported geometry

METHODS OF EVALUATION OF COMPETENCIES:

Evaluation of student mastery of course competencies will be accomplished using the following grading scale.

Grading:

A = 90 -100%

B = 80 - 89%

C = 70 - 79%

D = 60 - 69%

F = 0 - 59%

Extra Credit: The instructor must approve project.

0-5 points is given for extra credit per approved project. Project must be finished and handed in on specified date at the beginning of class. Only four approved projects per semester allowed.

