Digital Film Making 2
Week 1
Week 3
Week 4
Week 5
Week 7
Week 10
Week 11
Week 13
Week 14
Week 15
## 中韩新媒体学院课程授课教案

### 한중뉴미디어학원 강의교안

<table>
<thead>
<tr>
<th>课程号:</th>
<th>任课教师</th>
<th>Sihyun Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>教研室</td>
<td>강의실</td>
<td>Sihyun Kim</td>
</tr>
<tr>
<td>授课</td>
<td>课程</td>
<td>Digital Film Making 2</td>
</tr>
<tr>
<td>课题</td>
<td>剧本</td>
<td>4 Hour</td>
</tr>
<tr>
<td>任课教师</td>
<td>任课教师</td>
<td>Sihyun Kim</td>
</tr>
<tr>
<td>任课教师</td>
<td>任课教师</td>
<td>Sihyun Kim</td>
</tr>
<tr>
<td>任课教师</td>
<td>任课教师</td>
<td>Sihyun Kim</td>
</tr>
</tbody>
</table>

### 教学目标和要求

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### 教学重点

With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students' development the essential creative and technical skill to become an accomplished professional.

### 教学难点

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### 教学方法

- **Lecture and Critique**
- 教学方式 수업방식:
  - 讲授강의
  - 探究탐구
  - 问答문답
  - 实验실험
  - 演示시연
  - 练习연습
  - 其他기타

### 教学手段

- 教学手段교학수단:
  - 板书출판물
  - 多媒体멀티미디어
  - 模型모형
  - 实物시물
  - 标本표본
  - 挂图괘도
  - 音像음반
  - 其他기타

### 授课类型

- 理论课리론수업
- 讨论課토론수업
- 实验課실습수업
- 练习課연습수업
- 其他기타

### 参考资料


### 教学过程

<table>
<thead>
<tr>
<th>教学过程교육과정</th>
</tr>
</thead>
<tbody>
<tr>
<td>教学过程교육과정</td>
</tr>
</tbody>
</table>
1. Understanding of the current visual effects of techniques flow

   - What is a VFX Pipeline?
   - Research & Development
   - Case Study of VFX Movie
   - Importance of Breakdown of vfx film

2. Setting up the direction of Digital Film Making Class

   We will be discussing the manipulations needed to achieve this combination, and the various tools necessary to achieve the desired result. In the digital world, which is the world we’re interested in for the bulk of today’s discussion.

---

Case Study of vfx movie
# 中韩新媒体学院课程授课教案

한중뉴미디어학원 강의교안

<table>
<thead>
<tr>
<th>课程号：</th>
<th>任课教师</th>
<th>Sihyun Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>教研室</td>
<td>韦莉</td>
<td></td>
</tr>
<tr>
<td>授课</td>
<td>课题</td>
<td>Digital Film Making 2</td>
</tr>
<tr>
<td>强</td>
<td>强</td>
<td></td>
</tr>
<tr>
<td>授课时间长度</td>
<td>4 Hour</td>
<td></td>
</tr>
</tbody>
</table>

### 教学目标和要求
Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### 教学重点
With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

### 教学难点
This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### 教学方法分析
Lecture and Critique

### 教学手段分析
教学手段教科书：
- 讲授강의
- 探究탐구
- 问答문답
- 实验실험
- 演示시연
- 练习연습
- 其他기타

### 授课类型
理论课이론수업
- 讨论교토론수업
- 实验실험수업
- 练习연습수업
- 其他기타

### 参考资料

### 教学过程

<table>
<thead>
<tr>
<th>教学过程</th>
<th>教育과정</th>
</tr>
</thead>
</table>

中韩新媒体学院课程授课教案

한중뉴미디어학원 강의교안

<table>
<thead>
<tr>
<th>课程号：</th>
<th>任课教师</th>
<th>Sihyun Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>教研室</td>
<td>韦莉</td>
<td></td>
</tr>
<tr>
<td>授课</td>
<td>课题</td>
<td>Digital Film Making 2</td>
</tr>
<tr>
<td>强</td>
<td>强</td>
<td></td>
</tr>
<tr>
<td>授课时间长度</td>
<td>4 Hour</td>
<td></td>
</tr>
</tbody>
</table>

### 教学目标和要求
Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### 教学重点
With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

### 教学难点
This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### 教学方法分析
Lecture and Critique

### 教学手段分析
教学手段教科书：
- 讲授강의
- 探究탐구
- 问答문답
- 实验실험
- 演示시연
- 练习연습
- 其他기타

### 授课类型
理论课이론수업
- 讨论교토론수업
- 实验실험수업
- 练习연습수업
- 其他기타

### 参考资料

### 教学过程

<table>
<thead>
<tr>
<th>教学过程</th>
<th>教育과정</th>
</tr>
</thead>
</table>

中韩新媒体学院课程授课教案

한중뉴미디어학원 강의교안

<table>
<thead>
<tr>
<th>课程号：</th>
<th>任课教师</th>
<th>Sihyun Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>教研室</td>
<td>韦莉</td>
<td></td>
</tr>
<tr>
<td>授课</td>
<td>课题</td>
<td>Digital Film Making 2</td>
</tr>
<tr>
<td>强</td>
<td>强</td>
<td></td>
</tr>
<tr>
<td>授课时间长度</td>
<td>4 Hour</td>
<td></td>
</tr>
</tbody>
</table>

### 教学目标和要求
Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### 教学重点
With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

### 教学难点
This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### 教学方法分析
Lecture and Critique

### 教学手段分析
教学手段教科书：
- 讲授강의
- 探究탐구
- 问答문답
- 实验실험
- 演示시연
- 练习연습
- 其他기타

### 授课类型
理论课이론수업
- 讨论교토론수업
- 实验실험수업
- 练习연습수업
- 其他기타

### 参考资料

### 教学过程

<table>
<thead>
<tr>
<th>教学过程</th>
<th>教育과정</th>
</tr>
</thead>
</table>
Digital Matte Painting and Creating 2.5D Environment
The technique to the 2.5D Environment and will learn how to create a CG Environment, from a Matchmove Camera, to the 2.5D Scrip in Nuke, through the layout in Maya and Digital Matte Painting(DMP).

1. Introduction and Project Overview
   - Describe the workflow between the softwares (Maya and Nuke)
   - Set the Matte Painting Direction
   - Remind Camera Projection

2. Reconstruction Background (2D Matte Painting)
   - Dirty Texture
   - Multiply node
   - Masking

3. Setting Up Actual focal Length and Setting it in Maya for Camera Projection
   - Creating Projection Camera
   - Setting Up film Back and focal Length
   - Setting Up image plan for initial camera match

Matte Painting and Creating 2.5D Environment
## Digital Film Making 2

### Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

### This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### Lecture and Critique

Digital Matte Painting and Creating 2.5D Environment
The technique to the 2.5D Environment and will learn how to create a CG Environment, from a Matchmove Camera, to the 2.5D Scrip in Nuke, through the layout in Maya and Digital Matte Painting (DMP).

1. Creating Camera Rig and Set up Projection Script
   - Import Projection Camera and Objects
   - Making Animation Camera

2. Placement 2.5D Dirty Elements Using Card
   - Place Broken Room
   - Dust Source is placed at distance
   - Place Fire Source at distance

3. Final Rendering and Compositing
   - Creating Real Lens Effects (Defocus, Chromatic Aberration...)
   - Apply Bleach By Pass Look (Color Grading)
   - Adding Grain

Matte Painting and Creating 2.5D Environment
### 中韩新媒体学院课程授课教案

한중뉴미디어학원 강의교안

<table>
<thead>
<tr>
<th>课程号：</th>
<th>课序号：</th>
</tr>
</thead>
<tbody>
<tr>
<td>教研室</td>
<td>任课教师</td>
</tr>
<tr>
<td>教学</td>
<td>授课</td>
</tr>
<tr>
<td>目标和要求</td>
<td>时间长度</td>
</tr>
<tr>
<td>教学</td>
<td>课题</td>
</tr>
<tr>
<td>重点</td>
<td>任课教师</td>
</tr>
</tbody>
</table>

### 教学目标和要求

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### 教学重点

With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

### 教学难点

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### 教学方法

Lecture and Critique

### 教学手段

板书 | 多媒体 | 实物 | 标本 | 挂图

### 授课类型

理论课 | 讨论课 | 实验课 | 练习课

### 参考资料


### 教学过程

교육과정
How to apply Projected CG elements to live footage
Learn an efficient way to arrange the components individually projected cg elements to live footage without detailed modeling, texture, lighting and rendering

1. Preparing Projected CG Elements
   - Creating Projection Camera and Set up in Maya
   - Making Car Model for Projection
   - Assign Projection Shader
   - Export Camera and Modeling Data

2. Camera Tracking with live footage
   - Analysis footage moving
   - Set up Camera Parameters
   - Scene Coordinate and Set Ground
# Digital Film Making 2

**Course Description**

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

**Learning Objectives and Requirements**

With intensive classroom teaching by experienced faculty, to hands–on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

**Teaching Method**

Lecture and Critique

**Teaching Materials**

How to apply Projected CG elements to live footage
Learn an efficient way to arrange the components individually projected cg elements to live footage without detailed modeling, texture, lighting and rendering

1. Setting up Projected CG Elements to live footage
   - Place Broken Room
   - Dust Source is placed at distance
   - Place Fire Source at distance

2. Final Rendering and Compositing
   - Creating Real Lens Effects (Defocus, Chromatic Aberration..)
   - Apply Bleach By Pass Look (Color Grading)
   - Adding Grain

Create Projection images using photographed sources
**Digital Film Making 2**

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

Through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

**Lecture and Critique**

Replacement Background with Camera Projection and Camera Tracking

Replacement the background (2D Matte Painting) of live footage with matte painting image completed from Photoshop using camera tracking and projection

1. Creating a Matte Painting Based on live footage
   - What is good reference frame for matte painting?
   - Specifying the background area as the mask
   - Matte Painting technique with various source images
   - To organize the layers by distance

2. Camera Tracking with live footage
   - Analysis footage moving
   - Scene Coordinate and Set Ground
   - Create card objects for layered matte painting image
   - Applying a distance-specific background image to the card objects
### 课程号:

<table>
<thead>
<tr>
<th>教研室</th>
<th>任课教师</th>
<th>Sihyun Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>汉语</td>
<td>授课</td>
<td>4 Hour</td>
</tr>
</tbody>
</table>

### 咨询

#### 授课

<table>
<thead>
<tr>
<th>课题</th>
<th>Digital Film Making 2</th>
</tr>
</thead>
</table>

### 教学

<table>
<thead>
<tr>
<th>目标和要求</th>
<th>教学方法分析</th>
</tr>
</thead>
<tbody>
<tr>
<td>汉语</td>
<td>Lecture and Critique</td>
</tr>
</tbody>
</table>

#### 教学

- **目标和要求**
  - Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.
  
- **教学重点**
  - With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

#### 教学难点

- This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### 教学手段

<table>
<thead>
<tr>
<th>教学手段分析</th>
</tr>
</thead>
<tbody>
<tr>
<td>板书</td>
</tr>
<tr>
<td>多媒体</td>
</tr>
<tr>
<td>实物</td>
</tr>
<tr>
<td>挂图</td>
</tr>
<tr>
<td>其他</td>
</tr>
</tbody>
</table>

### 授课类型

<table>
<thead>
<tr>
<th>授课类型</th>
</tr>
</thead>
<tbody>
<tr>
<td>理论课</td>
</tr>
<tr>
<td>实践课</td>
</tr>
<tr>
<td>练习课</td>
</tr>
</tbody>
</table>

### 参考资料


### 教学过程

<table>
<thead>
<tr>
<th>教学过程</th>
</tr>
</thead>
<tbody>
<tr>
<td>교육과정</td>
</tr>
</tbody>
</table>

#### 教学过程说明

- 教学过程包括讲解、探究、问答、实验、演示、练习等。
- 教学手段包括板书、出版物、多媒体、模型、实物、标本、挂图、音像等。
- 授课类型包括理论课、讨论课、实践课、实验课、练习课等。
- 参考资料包括《导演、制片、编导、摄影指导视觉效果艺术和技术教程》第一版。
Replacement Background with Camera Projection and Camera Tracking

Replacement the background (2D Matte Painting) of live footage with matte painting image completed from photoshop using camera tracking and projection

1. Setting up Camera Projection
   - Understanding crop option of projection shader
   - Proceed with distance testing
   - Adjustment the position of each of layered card objects

2. Starting to Refine the Projection Geometry and Mask
   - Analyze the motion of a replaced background image
   - Correct the awkward edge mask – edge blur, defocus, color correction
   - Depth Expression – creating fog, color correction, z-defocus
   - Color Grading and Adding Grain

作業布置과제제출

Replacement matte painting image using photographed sources
**Digital Film Making 2**

**Lecture and Critique**

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

Understanding object tracking workflow in tracking software and Maya
How to use match mover to track and object as if it was our scene, the finish the shot
with maya and nuke. Using match mover we can find the movement of a real life
object and move a 3d objects to match.

1. Setting up supervised trackers on the objects
   - Understanding object tracking in nuke
   - Manual tracking workflow
   - Transfer tracker features to camera tracker
   - Solving the object from the supervised trackers
   - How to export tracking data to maya
<table>
<thead>
<tr>
<th>课程号：</th>
<th>课序号：</th>
<th>任课教师</th>
<th>Sihyun Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>教研室</td>
<td>教师</td>
<td>担当者</td>
<td></td>
</tr>
<tr>
<td>授课</td>
<td>课题</td>
<td>강의주제</td>
<td>Digital Film Making 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>授 课</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>时间长度</td>
<td>4 Hour</td>
</tr>
<tr>
<td>教学</td>
<td>目标和要求</td>
<td>강의목표</td>
<td>Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>教学中点</td>
<td>With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.</td>
</tr>
<tr>
<td>教学</td>
<td>难点</td>
<td>강의난점</td>
<td>This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry</td>
</tr>
<tr>
<td>方法</td>
<td>分析</td>
<td>강의방법분석</td>
<td>Lecture and Critique</td>
</tr>
<tr>
<td></td>
<td></td>
<td>教学方式 수업방식：</td>
<td>讲授강의■ 探究탐구□ 问答문답□ 实验실험■ 演示시연■ 练习연습□ 其他기타□</td>
</tr>
<tr>
<td>手段</td>
<td>分析</td>
<td>강의자료분석</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>教学手段 교학수단：</td>
<td>板书출판물□ 多媒体멀티미디어□ 模型모형□ 实物사물□ 标本표본□ 挂图괘도□ 音像음반□ 其他기타□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>授课类型 강의유형</td>
<td>理论课이론수업■ 讨论課토론수업□ 实验課실험수업□ 练习課연습수업■ 其他기타□</td>
</tr>
</tbody>
</table>

教学过程

교육과정
Understanding object tracking workflow in tracking software and Maya
How to use match mover to track an object as if it was our scene, the finish the shot with maya and nuke. Using match mover we can find the movement of a real life object and move a 3d objects to match.

1. Setting up tracking data in Maya
   - Geometry hierarchy panel for setting up 3d placement
   - Import objects and Attach to reference points of points cloud
   - Refining 3d object’s scale, rotation and position

2. Final Rendering and compositing
   - Setting up Render Passes (Color, Diffuse, Occlusion, Reflection, Specular..)
   - Understanding sampling value of arnold renderer
   - Positioning sky dome light and area lights
   - Multi-passes Compositing

作业布置과제제출

Replacement simple cg elements using object tracking workflow
### Course Overview:

**Course Title:** Digital Film Making 2

**Instructor:** Sihyun Kim

**Credit Hours:** 4 Hour

**Course Description:**

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

**Teaching Methods:**

- Lecture
- Critique
- Discussion
- Experiment
- Demonstration
- Practice
- Other

**Teaching Materials:**


---

**Teaching Process:**

The teaching process involves a comprehensive approach to teaching digital film making, combining theoretical knowledge with practical experience through a variety of assignments and projects. The course aims to equip students with the skills necessary to become proficient professionals in the field of visual effects.

- **Lecture and Critique:**
  - **Teaching Method:**
    - Lecture
    - Critique
    - Discussion
    - Experiment
    - Demonstration
    - Practice
    - Other

- **Teaching Materials:**
Face Replacement Using Object Tracking

For example to replace moving objects (face) in a shot, we are going to track and solve a prop carried by an actor. We will learn how to use the user tracking system to manually track an object and the solve moving objects.

1. Understanding facial tracking
   - How to generate survey data
   - How to use manual tracker
   - Generating survey data
   - Implementing survey data

2. Setting up the scene in maya
   - Geometry hierarchy panel for setting up 3d placement
   - Import object and attach to reference points of point clouds
   - Refining 3d object’s scale, rotation and position
## Lecture and Critique

### Course Description:

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### Teaching Methods:

- Lecture
- Critique

### Teaching Materials:


### Reference:

Face Replacement Using Object Tracking

For example to replace moving objects (face) in a shot, we are going to track and solve a prop carried by an actor. We will learn how to use the user tracking system to manually track an object and the solve moving objects.

1. Lighting and Rendering
   - Looking at the light setup (skydome, arealight, directional light)
   - Standardsurface shader – Preset: Chrome for Reflection Pass
   - How to use MatteShadow shader
   - Setting up render passes

2. Compositing our Render
   - Multi-passes compositing practice.
   - Refining detailed areas using id passes
   - Creating Light wrap
   - Creating Real Camera Lens Effects
   - Matching Color to live footage and Adding Grain

Face Replacement using photographed sources
## Digital Film Making 2

### Teaching Objectives and Requirements

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### Teaching Focus

With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

### Teaching Difficulties

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### Teaching Methods

Lecture and Critique

### Teaching Materials

Understanding UV Projection System and Reconstruction (re-texture) source

Learn Powerful UV unwrapping features that allow users to graft objects to other objects using painted textures. And we will learn how to re-texture surface and add some elements later in compositing stage using UV Projection mapping.

1. What is UV Projection?
   - Understanding UV Baking System in 3d Software
   - How to unwrap the objects
   - UV Project Node in Nuke
   - Project the texture UV coordinates onto the object using the axis transform value (translation, rotation, scale etc)

2. Setting up facial tracking
   - 3D Tracking using user tracks and automatic track
   - Generate Points cloud and survey data
   - Import external model data in nuke and match to survey data
   - Creating UV map with Scanline Render node
   - Marker Removal and live painting using baked uv projection image
| 教研室 | 韩国新媒体学院
| 课序号 | 
| 授课 | 강의
| 要求 | 강의목표
| 教学时间长度 | 4 Hour

**授课课题**

数字电影制作2

**教学目标和要求**

基于对数字电影制作过程的理解，目标是获取各种方法和技术来在视觉效果项目中生成正确的视觉识别。

**教学重点**

通过经验丰富的教员在课堂上的深入教学，通过各种外部实践项目和最终项目提交，学生可以发展成为一位专业的视觉效果专业人士。

**教学难点**

旨在培训学生在不断发展的视觉效果行业所需的视觉效果知识和技能。

**教学方法分析**

讲授、探究、问答、实验、演示、练习

**教学手段分析**

板书、视听、模型、实物、标本、挂图、多媒体

**授课类型**

理论课

**参考资料**


**教学过程**

1. 讲授
2. 探究
3. 问答
4. 实验
5. 演示
6. 练习
Understanding UV Projection System and Reconstruction (re-texture) source

Learn Powerful UV unwrapping features that allow users to graft objects to other objects using painted textures. And we will learn how to re-texture surface and add some elements later in compositing stage using UV Projection mapping.

1. Setting up room ground
   - Camera Tracking
   - Setting Ground and Origin
   - Scene coordination with camera tracker’ parameters
   - Export tracking data (camera and point cloud)

2. Setting up room’s ground
   - Setting up Tracking’s Hierarchy in outliner
   - Second scene coordination in maya using reference objects (ground)
   - Create ground model and door objects
   - Create UV for baked projection
   - Animation opening that opens the door
   - Export camera and animated ground and door objects

Extracting the texture from live footage and make vfx shot using uv projection techniques.
# Digital Film Making 2

## Course Description

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

## Course Information

<table>
<thead>
<tr>
<th>Course Code:</th>
<th></th>
<th>Instructor: Sihyun Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Time:</td>
<td>4 Hour</td>
<td></td>
</tr>
</tbody>
</table>

## Course Goals and Requirements

Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

## Course Methods

**Lecture and Critique**

- Teaching Method:  
  - Lecture
  - Discussion
  - Lecture
  - Demonstration
  - Practice
  - Other

## Course Materials


## Other Information

- Teaching Methods:  
  - Writing
  - Multi-media
  - Model
  - Object
  - Chart
  - Sound
  - Other

- Course Type:  
  - Theory
  - Discussion
  - Experiment
  - Practice

- Reference:  
  - Theory
  - Discussion
  - Experiment
  - Practice
Understanding UV Projection System and Reconstruction (re-texture) source
Learn Powerful UV unwrapping features that allow users to graft objects to other objects to other objects using painted textures. And we will learn how to re-texture surface and add some elements later in compositing stage using UV Projection mapping

1. Setting up Rendering
   - Create Skydome, Arealight
   - Assign concrete texture using lambert shader
   - Setting up render Passes (color, occlusion, diffuse passes)

2. UV painting workflow for Orthogonal view of scanline render
   - Import object from maya and setting up uv projection scripts
   - Baking Door Texture at reference frame
   - Assign baked texture to animated doors model

3. Compositing
   - Masking the area of door’s hole
   - Multi-passes compositing
   - To check the changes in lighting at baked texture
   - Modifying color and brightness
   - Final Render

作业布置과제제출
Extracting the texture from live footage and make vfx shot using uv projection techniques
### Course Title:

**Digital Film Making 2**

### Course Description:

**Based on the understanding of the principles and theories of the digital film making process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.**

**With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skill to become an accomplished professional.**

This course is aimed at training students in both the art fundamental and technical skills needed for ever expanding and demanding visual effects industry.

### Teaching Methods:

- Lecture and Critique

### Teaching Materials:


---

### Course Information:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Subject Teacher</th>
<th>Time Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Film Making 2</td>
<td>Sihyun Kim</td>
<td>4 Hour</td>
</tr>
</tbody>
</table>
Understanding UV Projection System and Reconstruction (re-texture) source
Learn Powerful UV unwrapping features that allow users to graft objects to other objects to other objects using painted textures. And we will learn how to re-texture surface and add some elements later in compositing stage using UV Projection mapping

1. Create Point cloud generator and build simple geometry to project
   - Camera Tracking and generate point cloud
   - Export tracked camera and points cloud to maya
   - Setting up simple environment geometry for projection
   - Export environment geometry to nuke

2. Re-Projection and Compositing
   - Setting up card objects in 3d space
   - Extracting black man’s mask and assign to card object in 3d space
   - Blood and ink splat painting in Photoshop
   - Re-Projection painting image to environment geometry
   - Final Rendering
강의지도계획 教学指导计划

一、 기본정보 基本内容

<table>
<thead>
<tr>
<th>과목명칭</th>
<th>디지털영상프로젝트 2</th>
<th>학과종류</th>
</tr>
</thead>
<tbody>
<tr>
<td>영문명칭</td>
<td>Digital Film Making 2</td>
<td>课程类型</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>총시수</th>
<th>이론시수</th>
<th>실험시수</th>
<th>실험시수</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

| 학점  | 3       |

<table>
<thead>
<tr>
<th>적용 대상</th>
<th>한중뉴미디어학원</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>韩中新媒体学院</td>
</tr>
</tbody>
</table>

| 과목담당자 | Si Hyun Kim |

<table>
<thead>
<tr>
<th>과목설명</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today, visual effects and motion graphics are integral part of communication, be it films, advertisement and commercials in theatres, televisions, mobile screens, computers or the print media. We experience this powerful form of communication every day and dream of creating our own work in this space. This course is aimed at training students in both the art fundamentals and technical skills needed for the ever expanding and demanding visual effects industry. With intensive classroom teaching by experienced faculty, to hands-on specialization through numerous external live projects and a final project submission the students develop the essential creative and technical skills to become an accomplished professional.</td>
</tr>
</tbody>
</table>

二、교육 목표 및 임무 教学目标及任务

Based on the understanding of the principles and theories of the digital film making
process, the aim is to obtain a variety of approaches and techniques to produce the correct visual discrimination in the making of the visual image.

### 三 教时安排

### 수업시간 배치 课时安排

<table>
<thead>
<tr>
<th>주간</th>
<th>수업내용</th>
<th>수업형식 및 시간안배</th>
<th>시간합계</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>이론</td>
<td>실험</td>
</tr>
<tr>
<td></td>
<td></td>
<td>理论</td>
<td>实验</td>
</tr>
<tr>
<td>1</td>
<td>Setting the direction of Digital Film Making Class</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2-3</td>
<td>Digital Matte Painting and 3D Compositing</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4-5</td>
<td>How to apply Projected CG Elements to Live Footage</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6-7</td>
<td>Replacement Background with Camera Projection and Camera Tracking</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8-9</td>
<td>Understanding Objects Tracking Workflow in Nuke And Maya</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>10-11</td>
<td>Face Replacement Using Objects Tracking</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>12-15</td>
<td>Understanding Texture UV Baking System and re-texture surface</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>
Chapter 1. Understanding of the current visual effects of technique flow and Set up the direction

We will be discussing the manipulations needed to achieve this combination, and the various tools necessary to achieve the desired result. In the digital world, which is the world we're interested in for the bulk of today's discussion.

Chapter 2. Digital Matte Painting and 3D Compositing

Discussing the entire process of how to create a 3D matte painted and projected environment, including modeling, texturing, projecting and compositing.

Chapter 3. How to apply projected CG elements to live footage

Learn an efficient way to arrange the components individually projected cg elements to live footage without detailed modeling, texture, lighting and rendering.

Chapter 4. Replacement Background Using Camera Tracking and Camera Projection

Replacement the background of live footage with the matte painting image completed from photoshop using camera tracking and camera projection.

Understand how to project and position the background divided by real world’s distance.

Chapter 5. Understanding Objects tracking workflow in Tracking Software and Maya

How to use Matchmover to track and object as if it was our scene, then finish the shot with Maya and Nuke.

Using matchmover we can find the movements of a real life object and move a 3d object to match.

Chapter 6. Face Replacement Using Object Tracking

For example to replace moving objects (face) in a shot, we are going to track and
solve a prop carried by an actor.

We will learn how to use the user tracking system to manually track an object and the solve moving objects (face) into Live footage

Chapter 7. Understanding UV Projection System and reconstruction (re-texture) surface

Learn Powerful UV unwrapping features that allow users to graft objects to other objects using painted textures.

And we will learn how to re-texture surface and add some elements later in compositing stage using UV Projection

五、实验及实习内容 实验及实习内容

1 week : Understanding of the current visual effects of technique flow and Set up the direction

2-3 week : Digital Matte Painting and 3D Compositing

4-5 week : How to apply projected CG elements to live footage

6-7 week: Replacement Background Using Camera Tracking and Camera Projection

8-9 week: Understanding Objects tracking workflow in Tracking Software and Maya

10-11 week: Face Replacement Using Object Tracking

12-15 week: Understanding UV Projection System

六、评价方式及要求 评价方式及要求

Attendance (10%) + Mid-term(30%) + Final(30%) + Assignment(10%) + Class Attitude (20%)

七、推荐教材及参考书本 推荐教材及参考书本

중남재경정법대학
학사과정 수업 진도 계획표
中南财经政法大学
学士课程教学进度计划表

(2018 학년도 제 2 학기)

(2018 年第二学期)

학원학과: 한국뉴미디어학원  神新传媒学院
강연교사: Si Hyun Kim
학과명칭: Digital Film Making2
학과번호:  课程代号:
과정유형: 课程类型: Major
총 시 수:  累计课时: 16
<table>
<thead>
<tr>
<th>강연교사</th>
<th>Si Hyun Kim</th>
<th>직 위</th>
<th>Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>학위</td>
<td>Bachelor</td>
<td>수업대상</td>
<td></td>
</tr>
<tr>
<td>과목명칭</td>
<td>Digital Film Making</td>
<td>과목번호</td>
<td></td>
</tr>
<tr>
<td>과목종류</td>
<td></td>
<td>교시(학점)</td>
<td></td>
</tr>
<tr>
<td>총 교 시</td>
<td>교실수업 60 시간;실습수업___시간;기타수업___시간;자습___시간</td>
<td></td>
<td>16(3)</td>
</tr>
<tr>
<td>평가방식</td>
<td>시험□</td>
<td>코스웨어 유有■ 무無□</td>
<td></td>
</tr>
<tr>
<td>시험형식</td>
<td>Open book□</td>
<td>수업방식 멀티미디어 및 실습수업 결합</td>
<td></td>
</tr>
<tr>
<td>교재명칭</td>
<td></td>
<td>멀티미디어 및 实習课程结合</td>
<td></td>
</tr>
<tr>
<td>출판사</td>
<td>출판연도</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>연구실</td>
<td>연구실 주임 연구실主任 (싸인 签名) 년月日</td>
<td></td>
<td></td>
</tr>
<tr>
<td>학과 주임</td>
<td>학과 주임 课程主任 (싸인 签名) 년月日</td>
<td></td>
<td></td>
</tr>
<tr>
<td>학원 담당자</td>
<td>学院 负责人 (싸인 签名) 学院印章 년月日</td>
<td></td>
<td></td>
</tr>
<tr>
<td>학사일정</td>
<td>수업내용 배정 (요점 기재) 课程内容安排 (记载要点)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>주간</td>
<td>教时 수업형식 및 수단 课程形式及手段</td>
<td></td>
<td></td>
</tr>
<tr>
<td>수업 외 숙제 또는 지도 안배 课外作业及辅导</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>집행 상황</td>
<td>실행情况</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>What is VFX Pipeline? Case Study of vfx movie’s breakdown Understanding of the current visual effects of techniques flow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Lectures &amp; Exercise</td>
<td>Exercise in a computer equipped classroom</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Setting up the direction of digital film making 2 class</td>
<td>4 Lectures &amp; Exercise</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------</td>
<td>----------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Describe the workflow between the software(maya and nuke)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set the Matte Painting direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reconstruction Background(2D matte painting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Setting up actual focal length and setting it in maya for camera projection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Creating Camera Rig to Rotate Around Point of View</td>
<td>4 Lectures &amp; Exercise</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>Placement 2.5d dirty texture elements using card objects</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modifying Channel Box to Accurately Control Scaling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final Rendering and Compositing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Creating 3D Scene with the Nukex Camera Tracker</td>
<td>4 Lectures &amp; Exercise</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>Creating a Proof of concept in Nuke with 3D Cards</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Placing 3d Card by Changing the Pivot and Nudging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Setting up Projected CG Elements to tracked live footage</td>
<td>4 Lectures &amp; Exercise</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>Adding Detail and fire and sparks Source in 3D</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creating Real Lens effects (defocus, chromatic abberation..)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Setting up Scene to Render</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Creating a Matte Painting Based on Live Footage</td>
<td>4 Lectures &amp; Exercise</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>What is good reference frame for matte painting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Topic</td>
<td>Lectures &amp; Exercise</td>
<td>Location</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Matte painting techniques with various source</td>
<td>4</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>Extracing Tracking data and Export to Maya</td>
<td></td>
<td>classroom</td>
</tr>
<tr>
<td></td>
<td>Setting up Camera Projection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Understanding crop option of camera projection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Starting to Refine the Projection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Geometry and mask</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Troubleshooting Projection issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Setting up Supervised Trackers on the Object</td>
<td>4</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>Solving the Object from the supervised Trackers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Geometry Hierarchy Panel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>How to export tracking data to Maya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Geometry Hierarchy Panel for Setting up 3D Placement</td>
<td>4</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>Solving a Moving Camera and Object Shot</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Completing the Moving Camera and Object Shot</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Setting up render passes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Understanding Arnold renderer's sampling value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Understanding facial tracking</td>
<td>4</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>Adding Trackers to Solve the Camera</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Generating Survey Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implementing Survey Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Looking at the light setup – skydome, aiArealight</td>
<td>4</td>
<td>Exercise in a computer equipped classroom</td>
</tr>
<tr>
<td></td>
<td>aiStandardSurface shader’s preset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Lecture Topics</td>
<td>Exercises</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| 12   | Chrome for reflection
How to use aiMatteShadow shader to extract only shadow
Setting up Render Passes
Compositing Our Render | Exercise in a computer equipped classroom |
| 13   | What is UV Projection?
Understanding uv baking system in maya
How to use uv project shader in nuke
3D tracking using user tracks and automatic track
Generating point cloud and creating survey data
Creating uv map in Scanline Render in nuke | Lectures & Exercise |
| 14   | Setting up tracking’s hierarchy in outliner
How to use second scene coordination in maya using referece object
Create uv for baked projection | Exercise in a computer equipped classroom |
| 15   | Setting up lighting and Rendering in maya
UV Paiting Workflow for Orthogonal View of a Perspective Plane
Building Basic Geometry for 3D Projection : ModelBuilder and PointGenerator | Exercise in a computer equipped classroom |
|      | Create point cloud generator and build simple geometry to proejct
Live-Painting , Procedural masking,
Procedual generation of projectable
Re-projection painting to environment geometry
Rebuilding projectable volumes with cards. | Lectures & Exercise |