MASTER SYLLABUS

GMMD 420 – Animation Techniques

Created by: Christopher S. Sweeney
Updated by: Kathleen Mahoney
A. **TITLE:** Animation Techniques

B. **COURSE NUMBER:** GMMD 420

C. **CREDIT HOURS:** (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)

   - # Credit Hours: 3
   - # Lecture Hours: 3 per week
   - # Lab Hours: per week
   - Other: per week

   Course Length: 15 Weeks

D. **WRITING INTENSIVE COURSE:** No

E. **GER CATEGORY:**

F. **SEMESTER(S) OFFERED:** Fall/Spring

G. **COURSE DESCRIPTION:**

   This course develops an overview of the techniques and history of 2D and 3D animation, including stop-motion and tweened animation. Students engage in hands-on projects involving the development of hand-drawn and computer-generated animation. Emphasis is placed on understanding the place of animation in the context of the film, television, internet, and gaming industries, project management, and the development of a personal animation style.

H. **PRE-REQUISITES/CO-REQUISITES:**

   a. Pre-requisite(s): GMMD 331 Digital Illustration and Typography, GMMD 412 Experimental Digital Video or GMMD 303 Experimental Digital Photography or permission of instructor
   b. Co-requisite(s):
   c. Pre- or co-requisite(s):

I. **STUDENT LEARNING OUTCOMES:**

<table>
<thead>
<tr>
<th>Course Student Learning Outcome [SLO]</th>
<th>PSLO</th>
<th>GER</th>
<th>ISLO</th>
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<tbody>
<tr>
<td>Integrate theories of narrative, immersion, and character development with analysis of animated products.</td>
<td>PSLO 1</td>
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<td>5</td>
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<tr>
<td>Assess current trends in animation production.</td>
<td>PSLO 1</td>
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<td>Compare the immersive qualities of various techniques of animation.</td>
<td>PSLO 7</td>
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<td>4 [GL] [IK]</td>
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<td>Develop a series of animated characters.</td>
<td>PSLO 6</td>
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<td>2</td>
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<tr>
<td>Construct a study comparing animated motion to real-life motion.</td>
<td>PSLO 7</td>
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<td>4 [GL] [IK]</td>
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<tr>
<td>KEY</td>
<td>Institutional Student Learning Outcomes [ISLO 1 – 5]</td>
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<td>ISLO #</td>
<td>ISLO &amp; Subsets</td>
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<tr>
<td>1</td>
<td>Communication Skills</td>
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<td>Oral [O], Written [W]</td>
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<td>2</td>
<td>Critical Thinking</td>
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<td></td>
<td>Critical Analysis [CA], Inquiry &amp; Analysis [IA], Problem Solving [PS]</td>
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<td>3</td>
<td>Foundational Skills</td>
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<td>Information Management [IM], Quantitative Lit./Reasoning [QTR]</td>
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<td>4</td>
<td>Social Responsibility</td>
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<td></td>
<td>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</td>
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<td>5</td>
<td>Industry, Professional, Discipline Specific Knowledge and Skills</td>
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**J. APPLIED LEARNING COMPONENT:** Yes___X___  No_______

**K. TEXTS:**

**L. REFERENCES:**

**M. EQUIPMENT:** A/V equipment; Activision’s *The Movies* for Windows

**N. GRADING METHOD:** A-F

**O. SUGGESTED MEASUREMENT CRITERIA/METHODS:**
- character studies
- motion study
- animated short
- historical research/emulation project
P.  **DETAILED COURSE OUTLINE:**

I. **History of 2D animation**
   a. zoetropes
   b. magic lanterns
   c. thaumatropes
   d. flip books

II. **Stop Motion Techniques**
   a. claymation
   b. stop motion and special effects

III. **Cell Animation and Mattes**
   a. keyframes and workflow
   b. interiority and Gertie
   c. Disney, Technicolor, and the 12 principles of animation
   d. rotoscoping
   e. Japanimation

IV. **Motion**
   a. methods for depicting motion
   b. Alexander technique

V. **Combining Animation and Real-life**
   a. special effects
   b. animated characters in the real world
   c. real world characters in the toon world

VI. **Computer animation and tweening**
   a. keyframing
   b. tweening
   c. shape
   d. motion
   e. color
   f. lighting

VI. **History of 3D animation**

VIII. **3D character modeling and motion**
    a. 3D space
    b. primitives
    c. surfacing and ray tracing
    d. lighting and cameras
    e. particle generation
    f. motion capture

Q.  **LABORATORY OUTLINE:**
None