COURSE OUTLINE

GMMD 420 – Animation Techniques

Prepared By:  Christopher S. Sweeney
Revised By: Kathleen Mahoney
A. **TITLE:** Animation Techniques

B. **COURSE NUMBER:** GMMD 420

C. **CREDIT HOURS:** 3

D. **WRITING INTENSIVE COURSE (OPTIONAL):** No

E. **COURSE LENGTH:** 15 Weeks/One Semester

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

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:** 3 hours lecture

H. **CATALOG 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.

I. **PRE-REQUISITES/CO-COURSES:** GMMD 331 Digital Illustration and Typography, GMMD 412 Experimental Digital Video or GMMD 303 Experimental Digital Photography or permission of instructor

J. **GOALS (STUDENT LEARNING OUTCOMES):**

<table>
<thead>
<tr>
<th>Course Objective</th>
<th>Institutional SLO</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Assess current trends in animation production.</td>
<td>2. Critical Thinking</td>
</tr>
<tr>
<td>c. Compare the immersive qualities of various techniques of animation.</td>
<td>2. Critical Thinking</td>
</tr>
<tr>
<td>e. Construct a study comparing animated motion to real-life motion.</td>
<td>1. Communication Skills 2. Critical Thinking</td>
</tr>
<tr>
<td>f. Design and create a variety of animated projects, culminating in a finalized animated short.</td>
<td>1. Communication Skills 3. Professional Competence</td>
</tr>
<tr>
<td>g. Evaluate student-and professionally-produced multimedia products.</td>
<td>2. Critical Thinking Skills 4. Inter/Intrapersonal Skills</td>
</tr>
</tbody>
</table>

L. **REFERENCES:**

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

N. **GRADING METHOD:** (P/F, A-F, etc.) A-F

O. **MEASUREMENT CRITERIA/METHODS:**
- character studies
- motion study
- animated short
- historical research/emulation project

P. **DETAILED TOPICAL 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