Course Outline

1. COURSE TITLE: HROP Animation
2. CBEDS TITLE: Computer Operations/Computer Sciences
3. CBEDS NUMBER: 4601
4. JOB TITLES/O*NET Code:
   Cartoonist, Multi-Media Artists and Animators, 27-1014.00
5. COURSE DESCRIPTION:
   Learn the latest in web animation using Macromedia’s Flash software. This class begins with a unit covering the basics of image enhancement before learning the basic tools of Flash. All instruction consists of short teacher lecture and demonstration followed by students doing hands-on activities. Class projects include synchronizing animation to musical soundtracks, action scripting, building website intros and incorporating Flash animation into web pages. Emphasis is given to project design, implementation and problem solving. Career awareness and employment portfolio are also units of instruction.
6. HOURS: 180 hours
7. PREREQUISITES: Students must be at least a junior or 16 years old in high school and computer literate (keyboarding, word processing, Internet skills).
8. DATE: January, 2005
9. COURSE OUTLINE:
   A. Career Preparation Standards:
      1. Students will understand how personal skill development affects their employability.
         a. Students will exhibit personal responsibility as well as teamwork skills. Progress will be made toward self-realization and understanding personal strengths and weaknesses.
      2. Students will understand key concepts on group dynamics, conflict resolution and negotiation.
         a. Many projects incorporate group work. Team members either choose specific roles or they are assigned. Natural leadership is allowed to develop. Students must exhibit respectful behavior and learn to be sensitive/aware of conduct that may be construed as offensive.
3. Students will exhibit critical thinking skills, logical reasoning, and problem solving.
   a. Many projects are self-directed which allow students to seek solutions to their own problems. In most cases, students must investigate a solution to a problem before they seek help.

4. Students will understand principles of effective communication.
   a. Students will complete a project for a customer. In order to accomplish this, they must meet regularly with the client, understand needs and limitations, document processes and procedures and complete a useful project.

5. Students will understand occupational safety issues including the avoidance of physical hazards in the work environment.
   a. Students are instructed on the importance of ergonomics and proper equipment handling.

6. Students will understand career paths and strategies for obtaining employment within their chosen fields.
   a. Guest speakers address classes and give insight into career paths. College and trade-school speakers address educational possibilities and students can sign up to use the Career and College center on campus. Job shadowing opportunities are available.

7. Students will understand and adapt to changing technology by identifying, learning, and applying new skills to improve job performance.
   a. In order to keep pace with technological advances, trade magazines, web sites and guest speakers are utilized as resources. Students will understand the concept of life-long learning.

B. CONTENT AREA SKILLS

1. IMAGE ENHANCEMENT

   A. Introduction
      ▪ Careers
      ▪ Tour software
      ▪ Using tools, palettes and options

   B. Working With Selections
      ▪ Learning selection tools
      ▪ Applying color
      ▪ Dodge and burn
      ▪ Using filters

   C. Working With Layers
      ▪ Adding layers and naming
      ▪ View and manipulate layers
      ▪ Deleting and locking
      ▪ Flatten images
      ▪ Layer styles and effects

   NO. OF HOURS
   2
   5
   5
D. Type 2
- Horizontal and vertical
- Simplifying
- Filters

E. Special Tools 8
- Cloning
- Cropping
- Smudge

2. FLASH ANIMATION

A. Introduction 2
- Software exploration
- Vector versus bitmap
- Educational opportunities
- Career exploration

B. Animation Environment 5
- Using tools and options
- Basic drawing
- Working with layers
- Keyframe animation
- Reading timeline
- Grouping

C. Graphic Symbols 10
- Motion tween
- Motion, color and transparency tween
- Color gradients
- Library
- Layer guides
- Layer folders
- Masking
- Importing/optimizing bitmaps
- Shape tween
- Project: Fall Animation

D. Button Symbols 6
- Button states
- Frame and button actions
- Normal vs. expert modes
- Image maps
- Project: Website Buttons
<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Movie Clip Symbols</td>
<td>Movie timeline, Nested symbols, Text effects</td>
</tr>
<tr>
<td>F. Sound</td>
<td>Importing, Event driven, Streamed, Optimizing sound, Editing, Synchronizing sound, Project: Lip Sync, Sound Movie</td>
</tr>
<tr>
<td>G. Scenes</td>
<td>Creating, Naming, Changing order, Inserting Video, Project: Banner Ad</td>
</tr>
<tr>
<td>H. Actionscripting</td>
<td>Frame and Button Actions, Movie Clip Actions, Properties and Operators, Dragging Movie Clips</td>
</tr>
<tr>
<td>Frame and Button Actions</td>
<td>Using frame labels, Applying play, stop and go to, Button actions, Projects: Hierarchical Menus, Wire Game</td>
</tr>
<tr>
<td>Movie Clip Actions</td>
<td>Using dot syntax, Relative vs. absolute paths, Naming movie clip instances, Controlling movie clips with actions, Using “With” action</td>
</tr>
<tr>
<td>Properties and Operators</td>
<td>Controlling properties of movie clips, Using key presses for control, Controlling different timelines, Project: Jukebox</td>
</tr>
<tr>
<td>Dragging Movie Clips</td>
<td>Nesting symbols, Invisible buttons, Custom Cursors, Project: Drag Face</td>
</tr>
</tbody>
</table>
Using Variables
- Naming
- Scope
- Values
- Literals vs. expressions
- Expressions
- Text fields
- If, then, else statements
- Projects: Calculator, Password

Properties
- Set property
- Get property
- Projects: Choose a Color

I. Testing Your Site
- Optimizing Files
- Using size report
- Using bandwidth profiler
- Using preloaders
- Loading/unloading movies

J. Final Project
- Flash portfolio with preloader

3. Portfolio
- Job application
- Cover letter
- Resume
- References
- Interview questions
- Thank you letter
- Resignation letter
- Letters of recommendation

10. Academic Credit – Elective, 10 units

11. Instructional Strategies
   A. Emphasis placed on problem solving and decision making
   B. Demonstration followed by activity
   C. Group instruction
   D. Individual instruction
   E. Peer instruction
12. Instructional Materials
   A. Digital camera
   B. Microphone
   C. Internet
   D. Scanner
   E. Macromedia Flash
   F. Teacher designed lessons

13. Certificates Earned
   A. Image Enhancement
   B. 2-D Animation