

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

GMMD 420 – Animation Techniques

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**CANINO SCHOOL OF ENGINEERING TECHNOLOGY
GRAPHIC AND MULTIMEDIA DESIGN
FALL 2018**

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:**

<u>Course Student Learning Outcome</u> <u>[SLO]</u>	<u>PSLO</u>	<u>GER</u>	<u>ISLO</u>
Integrate theories of narrative, immersion, and character development with analysis of animated products.	PSLO 1 Student assessment addresses composition, form, function, and design.		5
Assess current trends in animation production.	PSLO 1 Student assessment addresses composition, form, function, and design.		5
Compare the immersive qualities of various techniques of animation.	PSLO 7 Demonstrate historical or conceptual knowledge related to art, media, and visual communication.		4 [GL] [IK]
Develop a series of animated characters.	PSLO 6 Student documentation demonstrates awareness of design process (brainstorming, research, problem definition, finalization).		2
Construct a study comparing animated motion to real-life motion.	PSLO 7		4 [GL] [IK]

	Demonstrate historical or conceptual knowledge related to art, media, and visual communication.		
Design and create a variety of animated projects, culminating in a finalized animated short.	PSLO 6 Student documentation demonstrates awareness of design process (brainstorming, research, problem definition, finalization).		4 [GL] [IK]
Evaluate student-and professionally produced multimedia products.	PSLO 1 Student assessment addresses composition, form, function, and design.		5

KEY	<u>Institutional Student Learning Outcomes [ISLO 1 – 5]</u>
ISLO #	ISLO & Subsets
1	Communication Skills Oral [O], Written [W]
2	Critical Thinking <i>Critical Analysis [CA] , Inquiry & Analysis [IA] , Problem Solving [PS]</i>
3	Foundational Skills <i>Information Management [IM], Quantitative Lit./Reasoning [QTR]</i>
4	Social Responsibility <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
5	Industry, Professional, Discipline Specific Knowledge and Skills

J. **APPLIED LEARNING COMPONENT:** Yes ___X___ No _____

K. **TEXTS:**

Wells, Paul and Johnny Hardstaff. (2008). *Reimagining Animation: The Changing Face of the Moving Image*. New York: AVA Books.

L. % **REFERENCES:**

Beiman, Nancy. (2010). *Animated Performance: Bringing Imaginary Animal, Human, and Fantasy Characters to Life*. New York: AVA Books

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