

**College of San Mateo**  
**Official Course Outline**

1. **COURSE ID:** DGME 165    **TITLE:** Introduction to Digital Animation  
**Units:** 3.0 units    **Hours/Semester:** 40.0-45.0 Lecture hours; 24.0-27.0 Lab hours; and 80.0-90.0 Homework hours  
**Method of Grading:** Grade Option (Letter Grade or Pass/No Pass)  
**Recommended Preparation:**  
    DGME 211 or equivalent.
2. **COURSE DESIGNATION:**  
**Degree Credit**  
**Transfer credit:** CSU
3. **COURSE DESCRIPTIONS:**  
**Catalog Description:**  
    A project-based course exploring both traditional and digital animation techniques through the use of 2D digital animation. Other topics include implementation of successful graphic user interface solutions for web design and stand-alone applications using the scripting capabilities. Some familiarity with Adobe Illustrator is presumed. Software: Adobe Creative Cloud®
4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**  
    Upon successful completion of this course, a student will meet the following outcomes:
  1. Identify and demonstrate vector and raster graphics and the advantages of using each.
  2. Demonstrate non-linear artistic presentations through the integration of basic programming (ActionScript) into movies.
  3. Demonstrate "tween" features to minimize animation production time.
5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**  
    Upon successful completion of this course, a student will be able to:
  1. Identify and apply traditional animation principles and techniques.
  2. Demonstrate the concept of a time line and cell by cell animations.
  3. Identify the interface elements for animation.
  4. Demonstrate the ability to create simple to moderately complex animations.
  5. Demonstrate the ability of symbols and nested animations.
  6. Identify and demonstrate functional Graphic User Interfaces to use in web design.
  7. Apply the concept of interactivity to basic animation applications.
  8. Apply different animation systems and special effects.
  9. Identify and apply the basic concepts of ActionScript.
  10. Design, plan and produce medium-sized projects commonly requested by clients.
6. **COURSE CONTENT:**  
**Lecture Content:**
  1. History of digital and online animation
    - A. Review of tools, past and present
    - B. Early limitation (bandwidth, file size)
    - C. Contemporary considerations (mobile devices, screen size)
  2. The concept of a timeline and its use in creating animation
    - A. Time as a storytelling device
    - B. Placing sequential images
    - C. Manipulating position to affect timing
  3. Basic image and asset creation using vector graphics
    - A. Vector art concepts (mathematically-created graphics, file size)
    - B. Vector art tools (pen tool, shape tools)
    - C. Editing vector art (bezier curves, bezier handles, edit points)
  4. Frame by frame animation and tweening
    - A. Creating and setting key frames
    - B. Tweening types and uses

- C. Adjusting key positions and tween types
- 5. Elements and structures used to create vector animation
  - A. Linear presentations (frame 1 to end frame)
  - B. Interactive presentations (dynamic movement through timeline)
- 6. Incorporating vector animation into HTML documents
  - A. Creating an HTML shell
  - B. Loading vector animation into shell
  - C. Incorporating shell into website
- 7. The need for web compression and preloaders and how to create them
  - A. File size considerations
  - B. Compression codecs
  - C. Preloader requirements
  - D. Coding a preloader
  - E. Implementing a preloader
- 8. Buttons and other interactive online control paradigms
  - A. Default button types
  - B. Using code to make any graphic a button
- 9. Interactive Graphic User Interface design for the web
  - A. Transparency (alpha channels)
  - B. Symbol instances
  - C. Instance effects (tinting, uniform and non-uniform scaling, combinations)
- 10. Alpha transparencies and other special effects
  - A. Transparency (alpha channels)
  - B. Symbol instances
  - C. Instance effects (tinting, uniform and non-uniform scaling, combinations)
- 11. Introduction to scripting, coding, and controlling online vector animation
  - A. Common coding languages
  - B. Creating animation using code
  - C. Application-specific scripting languages
  - D. General use scripting languages
- 12. Importing and integrating raster graphics into animation and movies
  - A. File size and resolution
  - B. Compression considerations
  - C. Alpha channel use
  - D. Manipulating raster graphics on a timeline
  - E. Manipulating raster graphics using code
- 13. Integration and workflow with other software

**Lab Content:**

Students use lab time to complete projects and textbook assignments under the guidance of the instructor. Students will complete lab exercises and assignments that reinforce the lecture material along with strengthening their skills utilizing the appropriate software.

**7. REPRESENTATIVE METHODS OF INSTRUCTION:**

Typical methods of instruction may include:

- A. Lecture
- B. Lab
- C. Activity
- D. Critique
- E. Discussion
- F. Guest Speakers
- G. Observation and Demonstration
- H. Other (Specify): A. Lecture/Discussion -Encompassing in-class demonstrations & explanations on course topics B. Labs -Students will demonstrate examples of course topics on lab computers C. Reading assignments -Students will be given reading assignments to become familiar with the material presented in a corresponding lecture, lab, or quiz. D. Project assignments -Students will be given a project assignment to demonstrate their knowledge of the software and theory.

**8. REPRESENTATIVE ASSIGNMENTS**

Representative assignments in this course may include, but are not limited to the following:

**Writing Assignments:**

- Assignment/Project Assignment
  - 5-6 short answer and essay answer questions per assignment [4-5 assignments per topic], approx. 25-100 words per answer, weekly.
  - 10-15 written short answers incorporated in the 10-15 assignments and 5-6 projects, approx. 25-100 words per answer, weekly.
- Student Reflection Assignment
- Midterm
- Final Exam

**Reading Assignments:**

- Textbook - Required readings from chapters
  - Weekly reading from the course textbook [1-2 chapters] approx. 30-50 pgs./week
- Online Resources
- Instructor Resources

**Other Outside Assignments:**

Completion of homework assignments.

**9. REPRESENTATIVE METHODS OF EVALUATION**

Representative methods of evaluation may include:

- Class Participation
- Class Work
- Exams/Tests
- Group Projects
- Homework
- Lab Activities
- Oral Presentation
- Papers
- Portfolios
- Projects
- Quizzes
- Written examination
- Projects -Students will be assigned projects to execute to specifications. -Students will be graded on performance of these projects. Quizzes/Midterm/ Final Exam -Students will be tested on their retention of important principles. Class Demonstrations -Students will make presentations and demonstrate course topics.

**10. REPRESENTATIVE TEXT(S):**

Possible textbooks include:

- DeWilde, J. *30-Minute Drawing for Beginners: Easy Step-by-Step Lessons & Techniques for Landscapes, Still Lifes, Figures, and More*, 1st ed. Rockridge Press, 2021

**Origination Date:** November 2021

**Curriculum Committee Approval Date:** January 2022

**Effective Term:** Fall 2022

**Course Originator:** Diana Bennett