Digital Image & Motion Graphics -- Elective

Course Description

These courses will be based on hands on training in the use computer hardware and software to create digital graphics, starting with the basics of Photoshop and Illustrator and continuing to Maya and Blender. As the student develops the familiarity with these industry standard programs and graphic tools 2D && 3D animation and design projects will be overseen by mentors. The 2D and 3D animation partition of the class will focus on, rigging, planar tracking, rotoscoping, motion tracking in order to development, seamless continuity of character animation and dynamic set development. These will be offered as dual enrollment courses thru LSU.

Course Objectives

Technical Competencies 2D:

- Use design terminology when talking about creative works.
- Make use of basic design principles for creating compositions in Photoshop and Illustrator
- Create original work using a variety of digital illustration techniques
- Understand basic animation and accompanying tools.
- Create designs by iteration and experimentation and taking inspiration from research.
- Develop a design within a given set of restrictions.
- Use compositional studies to develop well-polished (final) drawings/designs.

General Competencies 2D:

- Analyze and incorporate historical and contemporary ideas and strategies across various digital genres.
- Speak and write effectively through medium-specific writing forms and speaking exercises.
- Develop innovative, artistically and culturally relevant projects through a process of idea formulation, planning, researching, experimenting, producing, seeking feedback, and refining.
- Work efficiently through adopting collaboration, project management and workflow skills.

Technical Competencies 3D:

- Apply the following 3D concepts: modeling, texturing, lighting and rendering
- Apply the following VFX concepts: compositing, rotoscoping, mattes, image acquisition, keying, and match moving
- Apply the following Animation concepts: squash & stretch, staging, anticipation, straight ahead & pose to pose, follow through & overlapping, slow in & slow out, arcs, secondary action, timing, exaggeration, solid drawings, and appeal

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Assessing Performance

Students are assessed by obtaining weekly grades on the following: Work Ethic, Projects, Presentations, and Reflections. Using tutorials, help menus, discussion boards, and targeted research are imperative to the creative process, as is exchanging information and ideas with your peers. Engaged participation in-class conversations and critiques are mandatory.

Course Essentials

Equipment	Cost/Unit
Consumable material	$50- 200 for consumable art supplies (clay, construction paper, stands, remotes, etc.)
Software	$2500per year for a subscriptions to Adobe Suite and ToonBoom
Hardware	$1200-2500per computer if you need to purchase $230per student Wacom Tablet && gaming mouse(precision) $1000-2000 classroom set of dslrs and tripods(6-8)

First Semester

Structure: Principles of Animation	12 principles of animation and application
Structure: Pre-Planning Pre Production	Filmmaking principles and development of movement in animation
Structure: Movement and Composition	Anatomy and Physiology of an fictional characters based upon the characters physical and personality composition

Second Semester

Structure: Character Design	Development of a unique individual based upon creative thought process and reproducibility
Structure: Intermediate Animation	Animation with the focus on the meta and tweens
Structure: VFX && Experiments in Movement	Research and experimentation in the effects of hybrid movement styles (IK, SAS, etc.)

DIGITAL IMAGE

(If teaching both Digital Image and Motion Graphics, see Motion Graphics sheet below)

1. Materials

   A desktop or laptop computer, access to 1-to-1 daily, and Internet. Chromebooks will not work.

Hardware/Reusable Material	Recommended Unit	Cost/Unit
Wacom Tablets	1 per student	$100
DSLR camera (Needed only for the motion graphics unit)	1 per 3-4 students	$550
Tripod	1/camera	$130
16 GB (minimum) SD Card	1/camera	$10
Software (Each student needs access to a computer)		
Subscription to Adobe Creative Cloud (Required for IBC's and for Dual Enrollment) (for schools of at least 100 users: $142/yr per transferable user) **OR** Davinci Resolve + Adobe alternatives (No IBC's available)	1 License per student	(a) $240/yr per student (b) $330/yr per shared device **OR** Free
Consumable		
Art supplies (clay, construction paper, stands, remotes, etc.)	1 per student	$10-20

2. Required software, networking access, and access to LSU servers

- Teachers will need to be able to share documents via Google Drive with LSU instructors.
- Software to install on each computer: Adobe Creative Suite.
- Principals will need to communicate with the district's information technology department to ensure that there are no technological restrictions that block access to servers in the lsu.edu or lsupathways.org domains. In addition, students must be able to access the following websites:

adobe.com	youtube.com	freesound.org	vimeo.org	archive.org

3. Required teacher collaborations

   Teachers will communicate with LSU instructors via a Google group set up for this purpose.

4. Required administration of course content, pre/post test, and research instruments

   All required materials and instruments will be either posted in a Google drive or their location announced via the Google group for this course.

5. Other

   As this is a project-based learning class, we strongly suggest that each section of the course should be limited to a *maximum* of 20 students.