Art New Media

Overview

This degree emphasizes visual arts produced in a digital environment. Art New Media focuses on new technology and a strong foundation in the fundamentals of visual art. Coursework includes a wide spectrum of studies in traditional and new media fundamentals relevant to art and design.

Art New Media at American River College offers an art and design education in a digital environment that honors traditional art foundations. Learn the latest tools and techniques in multiple disciplines. Sharpen your innate talent. Discover the power of image and message. Paint with pixels, sculpt with digital clay and fire up your brain.

Roadmaps

Road maps lay out all of the courses you need to take for a given degree or certificate.

Get a Roadmap! Explore Ways to Complete These Programs (/academics/arc-program-road-maps)

Division Dean
Angela Milano (/about-us/contact-us/faculty-and-staff-directory/angela-milano)

Department Chair
Matthew Stoehr (/about-us/contact-us/faculty-and-staff-directory/matthew-stoehr)

Area of Interest
Arts (/academics/areas-of-interest/arts)

Division
Fine & Applied Arts Division Office (/academics/fine-applied-arts-division-office)

Phone
(916) 484-8433

Associate Degrees

A.A. in Art New Media

This degree emphasizes visual arts produced in a digital environment. Art New Media focuses on new technology and a strong foundation in the fundamentals of visual art. Coursework includes a wide spectrum of studies in traditional and new media fundamentals relevant to art and design.

Catalog Date: June 1, 2020

Degree Requirements

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>ART 300</td>
<td>Drawing and Composition I</td>
<td>3</td>
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<tr>
<td>ART 320</td>
<td>Design: Fundamentals (3)</td>
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<td>ART 323</td>
<td>Design: Color Theory</td>
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<td>ARTH 310</td>
<td>Modern Art</td>
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<td>ARTNM 305</td>
<td>History of Graphic Design</td>
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<td>ARTNM 450</td>
<td>Portfolio for Art New Media</td>
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<td>ARTNM 303</td>
<td>Graphic Design: Typography (3)</td>
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<td>ARTNM 320</td>
<td>Facial Expression and Anatomy (3)</td>
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<td>ARTNM 322</td>
<td>Beginning Digital Art (3)</td>
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<td>Digital Design (3)</td>
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<td>ARTNM 325</td>
<td>Intermediate Digital Design (3)</td>
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<tr>
<td>ARTNM 326</td>
<td>Digital Painting (3)</td>
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<tr>
<td>ARTNM 328</td>
<td>Beginning Digital Photo Imagery (3)</td>
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<td>ARTNM 331</td>
<td>Integrating Digital Media with Traditional Media I (3)</td>
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<td>Digital Video (3)</td>
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<td>Design for Publication (3)</td>
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<td>ARTNM 354</td>
<td>Digital Prepress (3)</td>
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<td>ARTNM 358</td>
<td>College Magazine: Art Selection and Editing (1 - 2)</td>
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<td>Introduction to Illustration (3)</td>
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<td>Character Design (3)</td>
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<td>ARTNM 373</td>
<td>Storyboarding (3)</td>
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<td>ARTNM 401</td>
<td>Introduction to Web Design (3)</td>
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<td>Intermediate Web Design (3)</td>
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<td>ARTNM 404</td>
<td>Interactive Basics (3)</td>
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<td>Digital 2D Animation (3)</td>
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<td>ARTNM 406</td>
<td>Design for Tablets (3)</td>
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</table>
### The Art New Media Associate in Arts (A.A.) degree may be obtained by completion of the required program, plus general education requirements, plus sufficient electives to meet a 60-unit total. See ARC graduation requirements.

#### Student Learning Outcomes

Upon completion of this program, the student will be able to:

- analyze design principles relevant to new media technology
- combine various technical skills in the field of art new media
- create visual images utilizing traditional and/or digital media
- synthesize concepts of modern art history and apply them to illustration, animation, graphic design, and web design
- conceive visual solutions for successful visual communication
- critique new media works

### Career Information

Career opportunities include Graphic Designer, Character Designer, 3D Animator, Web Designer, 3D Modeler and Texture Artist, 3D Artist, Commercial Illustrator, and Print Designer.

### A.A. in Technical Communications

This is an interdisciplinary course of study designed to prepare students for employment as professional writers and communicators in a variety of media intended to instruct and inform audiences. The degree program includes substantial course work in writing, information design, editing, page design, online help development, web site creation, and the use of industry standard applications.

#### Degree Requirements

<table>
<thead>
<tr>
<th>COURSE CODE</th>
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<tr>
<td>CISA 305</td>
<td>Beginning Word Processing</td>
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<td>Web Publishing</td>
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<td>Newswriting and Reporting</td>
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<td>TECCOM 300</td>
<td>Introduction to Technical/Professional Communication</td>
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<td>TECCOM 310</td>
<td>Technical/Professional Communication: Writing Reports</td>
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<td>TECCOM 320</td>
<td>Technical/Professional Communication: Proposal Writing</td>
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<td>TECCOM 330</td>
<td>Technical/Professional Communication: Writing Technical Manuals</td>
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<tr>
<td>TECCOM 340</td>
<td>Technical/Professional Communication: Developing Help Systems</td>
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<td>ARTNM 330</td>
<td>Intermediate Digital Photo Imagery (3)</td>
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<td>ARTNM 352</td>
<td>Design for Publication (3)</td>
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<tr>
<td>CISA 331</td>
<td>Intermediate Desktop Publishing (2)</td>
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<td>CISW 310</td>
<td>Advanced Web Publishing (4)</td>
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<tr>
<td>CISW 321</td>
<td>Web Site Development using Dreamweaver (3)</td>
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<tr>
<td>CISW 400</td>
<td>Client-side Web Scripting (4)</td>
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<td>CISW 410</td>
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<tr>
<td>ENGWR 301</td>
<td>College Composition and Literature (3)</td>
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</table>

Total Units: 36.5

The Technical Communications Associate in Arts (A.A.) degree may be obtained by completion of the required program, plus general education requirements, plus sufficient electives to meet a 60-unit total. See ARC graduation requirements.

#### Student Learning Outcomes

Upon completion of this program, the student will be able to:

- analyze audience information needs and propose solutions to aid the audience.
- design technical communication solutions for a variety of industry and government purposes.
- design and create web sites and help systems with effective visual design, navigation, and written content.
- design and publish printed pages with effective design, organization, content, and indexing.
- compose professional prose for a variety of audiences with a variety of purposes.
- compose and edit professional documents in grammatically correct, concise English.
- create and use style templates in a variety of industry standard software.

### Career Information

Technical communicators may be employed in a variety of occupations in government, scientific firms, nonprofits, natural resources, finance, education, and high tech.

### Certificates of Achievement
3D Rigging Technical Director Certificate

This certificate offers training on the articulation of movement for 3D objects, environments, and characters. Rigging is the process of giving a character controls for movement, thereby "articulating" its range of motion, or bringing the character to life. Standard rigs for vehicles, bipedal, and quadrupedal characters are created, as well as rig variations, such as cartoon rigs to maximize flexibility. In addition, students are expected to increase efficiency of production by creating rig building tools. Also, interfacing tools are created to increase efficiency and usability of the rigs in production.

Catalog Date: June 1, 2020

Certificate Requirements

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<th>COURSE CODE</th>
<th>COURSE TITLE</th>
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<td>ARTNM 429</td>
<td>3D Rigging and Rig Building</td>
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<td>CISC 323</td>
<td>Linux Operating System</td>
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<td>CISP 300</td>
<td>Algorithm Design/Problem Solving</td>
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<td>MATH 372</td>
<td>College Algebra for Calculus</td>
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<td>MATH 373</td>
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<tr>
<td>or ARTNM 431</td>
<td>3D Short Production (3)</td>
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</table>

Total Units: 21

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- differentiate the types of deformers to achieve a specific deformation called for by animation.
- create a concise set of animation controls.
- analyze the animator's needs to provide and refine an articulation of the full range of expressions and body movement needed to support a character's acting range.
- create a portfolio quality demonstration reel of their rigged animation.
- proficiently use a programming language to solve rigging problems, create new tools, and create interfacing tools for the animator.
- proficiently use math to solve rigging problems.
- design and maintain master rigs that can be re-used as a basis for articulating similar characters, or applying existing rigs to newly created character sculpts.
- differentiate the deformation needs of realistic musculature and traditional cartoon movement.

Career Information

Students can apply their 3D rigging skills in film, game, and broadcast, as well as local industries, such as medical, legal, engineering, Web, and fine art. Students can continue their studies in 3D rigging at a four-year college or choose an entry-level position in any of the 3D animation industries.

3D Technical Director Certificate

This certificate offers a comprehensive understanding of the computer generated three-dimensional (CG 3D) production process. It is designed for self-learners, entrepreneurs, and developers of independent content or someone looking for a high level position in a 3D animation company. A broad range of topics are covered from traditional sculpting to digital rendering. In addition to technical direction, this certificate is ideal for any 3D Generalist position.

Catalog Date: June 1, 2020

Certificate Requirements

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<td>ART 300</td>
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<td>ART 304</td>
<td>Figure Drawing I</td>
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<td>ARTNM 320</td>
<td>Facial Expression and Anatomy</td>
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<td>ARTNM 420</td>
<td>Introduction to 3D Modeling</td>
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<td>ARTNM 429</td>
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<td>3D Short Production (3)</td>
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</table>

Total Units: 33

1ARTNM 422 has a prerequisite of ARTNM 405

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- plan a production pipeline and solve 3D production issues with a holistic understanding of 3D.
- create portfolio-quality demonstration reels with animation, modeling, texturing, and rigging.
- differentiate various 3D software strengths and weaknesses.
- apply for an entry-level 3D position calling for a 3D Technical Director or 3D Generalist.
- create digital textures and materials from observing and scanning real-world surfaces and materials.
- apply textures and materials to a computer-generated environment.
**NOTICE**: The provided text seems to have been cut off in the middle of sentences, and contains repetitive elements. The content is not clearly structured and may not be accurate. Here's an attempt to break it down into sections:

### Career Information

Students can apply 3D skills in film, game, and broadcast, as well as local industries, such as medical, legal, engineering, Web, and fine art. Students can continue their studies in 3D at a four-year college or choose an entry-level position in any of the 3D animation industries.

### ARTNM: 3D Animation Certificate

This certificate focuses on traditional animation principles to create believable animations. Animations created range from flying logos for broadcast television, to animated product placement, to characters used for the telling of fantastic stories. It focuses on skill sets in both the traditional arts and digital environments.

_Catalog Date: June 1, 2020_

### Certificate Requirements

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<td>Work Experience in (Subject) (1 - 4)</td>
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</table>

**Total Units:** 18

### Student Learning Outcomes

Upon completion of this program, the student will be able to:

- research and demonstrate application of the principles of animation to tell a story with meaning through movement.
- create the motions, gestures, and expressions of three-dimensional computer graphics characters and objects.
- critique animation and regularly improve upon demonstration reels.
- create high quality 3D models from live or image reference, and animate the models for use in demonstration reels.
- create a portfolio-quality 3D animation demonstration reel.
- create animation from live reference, video reference, and from hand-drawn imagery.
- create animation in various 2D and 3D software programs and apply the principles regardless of the software differences.
- block-in movements in rough animation and show for approval in a weekly review.
- finish work for approval in a timely manner.

### Career Information

Students can apply 3D animation skills in film, game, and broadcast, as well as local industries, such as medical, legal, engineering, Web, fine art, and entrepreneurial. Students can continue their studies in 3D animation at a four-year college or choose an entry level position in any of the 3D animation industries.

### ARTNM: 3D Modeling and Texturing Certificate

This certificate combines a foundation of traditional sculpture and painting with computer generated three dimensional digital modeling and painting. High polygon modeling techniques are used to create assets for any industry in need of 3D modeling and texturing. Texturing will focus primarily on the use of manipulated and painted imagery to create complex surfaces.

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### Certificate Requirements

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<th>COURSE CODE</th>
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<tr>
<td>ART 375</td>
<td>Figure Sculpture</td>
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<td>Introduction to 3D Modeling</td>
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<td>ARTNM 421</td>
<td>3D Character Modeling</td>
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<tr>
<td>WEXP 498</td>
<td>Work Experience in (Subject) (1 - 4)</td>
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</table>

**Total Units:** 18

### Student Learning Outcomes

Upon completion of this program, the student will be able to:

- create complex 3D environments, characters, and props to be used in the any production.
- create believable models of objects from life, photographs, or hand drawn reference.
- create accurate models of the human anatomy with a clear and clean polygon flow showing muscle, fat, skin, and bone topology.
- create believable textures from reference images.
• analyze and assess the needs of a project and determine the complexity of the models and textures to match the project.
• create clean, high polygon count, polygon meshes ready for production.
• create facial structures and shape targets preparing the character for facial animation.
• create a portfolio quality modeling and texturing demonstration reel.

Career Information

Students can continue their studies in 3D modeling and texturing at a four year college or choose to apply their 3D modeling and texturing skills in the film, game, and broadcast industries, as well as other local industries, such as medical, legal, engineering, Web, and fine art.

ARTNM: Character Design Certificate

This certificate focuses on the visual concept development of believable characters. Skills in traditional and digital illustration are applied to create characters for animation, games, comics, graphic novels, children’s books, and illustrated novels.

Catalog Date: June 1, 2020

Certificate Requirements

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<tr>
<td>ART 300</td>
<td>Drawing and Composition I</td>
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<tr>
<td>ART 304</td>
<td>Figure Drawing I</td>
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<td>or ART 306</td>
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<td>ARTNM 326</td>
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<td>Total Units:</td>
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</tr>
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</table>

Student Learning Outcomes

Upon completion of this program, the student will be able to:

• create believable characters using traditional and digital media
• research the environment, social and cultural structure, anatomy, costume and motion as they relate to a particular narrative
• create characters with believable gesture and movement that are consistent with the character concept
• analyze and apply facial expressions for the character that effectively describe the character within a narrative
• utilize references from photographs, illustration, and animation to create characters that effectively interact within their environment
• compile a portfolio that presents the process of character creation from research through final presentation

Career Information

Career opportunities include film, game, broadcast, and illustration industries.

ARTNM: Commercial Illustration Certificate

This certificate focuses on traditional visual art principles to clearly communicate the needs of a client and their target audience. It includes skill sets from both the traditional arts and digital media. Illustration skills are applied in areas of editorial, advertising, technical and book illustration, as well as 3D modeling and texturing, animation, set design, and product design.

Catalog Date: June 1, 2020

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<td>ARTNM 370</td>
<td>Introduction to Illustration (3)</td>
<td>3</td>
</tr>
<tr>
<td>or ART 314</td>
<td>Introduction to Illustration (3)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Units:</td>
<td>18</td>
</tr>
</tbody>
</table>

Student Learning Outcomes

Upon completion of this program, the student will be able to:

• create drawn and painted images using traditional and digital media
• research and develop visual content with an understanding of the client's target audience
• develop and produce visual solutions that meet the needs of a client within a deadline
• analyze and apply color schemes to communicate a message that meets the client's needs
• research modern art and illustration history, applying concepts to illustrations to effectively communicate visually within contemporary culture
• compile a portfolio that demonstrates skill with both traditional and digital media and client based concept development

Career Information
ARTNM: Web Design Certificate

The Web Design certificate incorporates the fundamentals of visual communication with industry-standard work flow and tools to prepare creatives and talents for the web design industry. The certificate focuses on the visual language necessary for a web designer to produce compelling graphics in the web authoring environment. Students are encouraged to further their studies in interactive design by obtaining other Art New Media Certificates such as the Interactive Design Certificate, the Digital Imagery Certificate and the Video Certificate within the Art New Media department, or similar programs at a four-year college, or encouraged to choose an entry-level position in the web design industry.

Catalog Date: June 1, 2020

Certificate Requirements

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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</thead>
<tbody>
<tr>
<td>ARTNM 300</td>
<td>Graphic Design: Typography</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 324</td>
<td>Digital Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 328</td>
<td>Beginning Digital Photo Imagery</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 325</td>
<td>Intermediate Digital Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 330</td>
<td>Intermediate Digital Photo Imagery</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 401</td>
<td>Introduction to Web Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 331</td>
<td>Integrating Digital Media with Traditional Media</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 332</td>
<td>Digital Video</td>
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<tr>
<td>ARTNM 402</td>
<td>Intermediate Web Design</td>
<td>3</td>
</tr>
<tr>
<td>Total Units:</td>
<td></td>
<td>27</td>
</tr>
</tbody>
</table>

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- produce compelling graphics incorporating industry-standard work flow and tools
- design visually successful web pages/web sites using visual design concepts
- evaluate content needs for target audience
- assess the most effective navigation flow
- conceive and deliver visual solutions for a client within a defined time frame

Career Information

Web design skills are used in business, government, educational institutions, and the entertainment industry.

Art New Media: Illustration Certificate

This certificate focuses on using traditional visual art principles to clearly communicate the needs of a client and/or target a specific audience. It includes skill sets from both the traditional arts and digital media. Illustration skills are applied in animation, character design, 3D modeling and texturing, set design, product design, as well as areas of editorial, advertising, technical, and book illustration.

Catalog Date: June 1, 2020

Certificate Requirements

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 300</td>
<td>Drawing and Composition I</td>
<td>3</td>
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<tr>
<td>ART 304</td>
<td>Figure Drawing I</td>
<td>3</td>
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<tr>
<td>ART 323</td>
<td>Design: Color Theory</td>
<td>3</td>
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<tr>
<td>ART 327</td>
<td>Painting I (3)</td>
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<tr>
<td>or ART 336</td>
<td>Watercolor Painting (3)</td>
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<tr>
<td>ARTH 310</td>
<td>Modern Art</td>
<td>3</td>
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<tr>
<td>ART 320</td>
<td>Design: Fundamentals (3)</td>
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<tr>
<td>ARTNM 320</td>
<td>Facial Expression and Anatomy (3)</td>
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<tr>
<td>or ART 306</td>
<td>Facial Expression and Anatomy (3)</td>
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<tr>
<td>ARTNM 324</td>
<td>Digital Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 326</td>
<td>Digital Painting</td>
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<tr>
<td>ARTNM 370</td>
<td>Introduction to Illustration (3)</td>
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</tr>
<tr>
<td>or ART 314</td>
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<tr>
<td>Total Units:</td>
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<td>30</td>
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</table>

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- create drawn and painted images using traditional and digital media
- research and develop visual content with an understanding of the target audience
- develop and produce visual solutions that meet the needs of a client within a deadline
- analyze and apply effective color schemes to enhance the viewer's emotional response to the content of an illustration
- research modern art and illustration history, applying concepts to illustrations to effectively communicate visually within contemporary culture
- create a portfolio that demonstrates skill with traditional and digital media and concept development

Career Information

Career opportunities include animation, character design, 3D modeling and texturing, set design, product design, as well as areas of editorial, advertising, technical, and book illustration.

Graphic Design: Intern Artist Certificate
This certificate introduces the software and theory used by graphic designers in the design studio. It covers page layout, vector drawing, and photo manipulation basics. It also focuses on current industry trends in the digital marketplace.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTNM 303</td>
<td>Graphic Design: Typography</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 324</td>
<td>Digital Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 328</td>
<td>Beginning Digital Photo Imagery</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 352</td>
<td>Design for Publication</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 359</td>
<td>College Magazine: Design and Production</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 401</td>
<td>Introduction to Web Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 402</td>
<td>Intermediate Web Design</td>
<td>3</td>
</tr>
<tr>
<td>Total Units:</td>
<td></td>
<td>21</td>
</tr>
</tbody>
</table>

**Student Learning Outcomes**

- assess typographic hierarchy as it relates to message development.
- build digital files to specs required by the current industry.
- integrate different software files into one digital file.
- resolve digital production issues as they relate to industry standards.
- correlate deadline issues as they relate to production schedules.

**Career Information**

Students can apply their acquired skills for internship positions in graphic arts related jobs such as entry-level design positions, entry-level in-house design positions, and production artist positions. Or, with additional coursework, students can continue their studies at a qualified four-year college.

**Graphic Design: Junior Artist Certificate**

This certificate introduces software applications, industry-standard hardware, and the typographic/fundamental and technical skills necessary for today's workplace. It focuses on visual communication through layout design, typography, and the dynamic relationship between image and type. It meets current marketplace demands by incorporating print/non-print media and the effect new technologies have on a changing communications field.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTNM 303</td>
<td>Graphic Design: Typography</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 305</td>
<td>History of Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 324</td>
<td>Digital Design</td>
<td>3</td>
</tr>
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<td>ARTNM 325</td>
<td>Intermediate Digital Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 328</td>
<td>Beginning Digital Photo Imagery</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 330</td>
<td>Intermediate Digital Photo Imagery</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 352</td>
<td>Design for Publication</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 354</td>
<td>Digital Prepress</td>
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<td>ARTNM 359</td>
<td>College Magazine: Design and Production</td>
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<tr>
<td>Total Units:</td>
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<td>30</td>
</tr>
</tbody>
</table>

**Student Learning Outcomes**

- analyze and formulate visual communication concepts using graphic design principles and standards.
- evaluate the role of typography as a communication device and know how the graphic design field fits into today's multimedia environment.
- design and produce two-dimensional media projects taking into account client needs, composition, color, and hierarchy of information.
- construct camera-ready art with industry standard graphic design software.
- evaluate problems generated by clients and execute visual concepts through research, thumbnails, roughs, design development and presentation.
- prioritize design and production deadlines for a deadline oriented industry.

**Career Information**

Students can apply their acquired skills in typography, software and concept development to apply for production artist or junior graphic designer positions.

**Graphic Design: Production Artist Certificate**

This certificate covers the process of digital production for printing and web. It focuses on the core software programs and current industry trends for digital media.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>ARTNM 324</td>
<td>Digital Design</td>
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<tr>
<td>COURSE CODE</td>
<td>COURSE TITLE</td>
<td>UNITS</td>
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</tr>
<tr>
<td>ARTNM 328</td>
<td>Beginning Digital Photo Imagery</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 352</td>
<td>Design for Publication</td>
<td>3</td>
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<tr>
<td>ARTNM 354</td>
<td>Digital Prepress</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 359</td>
<td>College Magazine: Design and Production</td>
<td>3</td>
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<tr>
<td>ARTNM 401</td>
<td>Introduction to Web Design</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units:</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

**Student Learning Outcomes**

Upon completion of this program, the student will be able to:

- investigate the basics of digital software for vector- and pixel-based media
- analyze specific conditions which influence digital production decisions
- categorize raster-based images and vector-based art as they relate to print and web
- calculate resolution, color modes and file size as they relate to print and web production
- construct a series of projects which build knowledge of simple and complex production issues

**Career Information**

This certificate prepares students for entry-level print or web production artist positions.

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**Technical Communications Certificate**

This certificate offers an interdisciplinary program of courses in Technical Communications, Art/New Media, and Computer Information Systems to prepare students for a variety of technical writing and professional communication careers. The certificate includes the theory, writing skills, design background, and computer applications knowledge needed for jobs in technical communication.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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</thead>
<tbody>
<tr>
<td>ARTNM 352</td>
<td>Design for Publication (3)</td>
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<td>or CISA 330</td>
<td>Desktop Publishing (2)</td>
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<td>CISA 305</td>
<td>Beginning Word Processing (2)</td>
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<tr>
<td>or BUSTEC 310</td>
<td>Introduction to Word/Information Processing (3)</td>
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<tr>
<td>CISW 300</td>
<td>Web Publishing</td>
<td>3</td>
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<tr>
<td>TECCOM 309</td>
<td>Introduction to Technical/Professional Communication</td>
<td>3</td>
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<td>TECCOM 310</td>
<td>Writing Digital Content</td>
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<td>TECCOM 330</td>
<td>Writing Technical Manuals</td>
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<td>BUS 100</td>
<td>English for the Professional (3)</td>
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<tr>
<td>BUS 310</td>
<td>Business Communications (3)</td>
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<tr>
<td>CISW 321</td>
<td>Web Site Development using Dreamweaver (3)</td>
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<tr>
<td></td>
<td><strong>Total Units:</strong></td>
<td><strong>15 - 17</strong></td>
</tr>
</tbody>
</table>

**Student Learning Outcomes**

Upon completion of this program, the student will be able to:

- analyze audience information needs.
- compose concise, clearly written professional documents organized with the audiences' needs in mind.
- design print and online resources that communicate organizations' values, enhance readability, and are easy to use.
- demonstrate basic skills in the use of word processing, page design, and web design applications.
- evaluate organizations' communication goals and needs based on technical writing principles.

**Career Information**

Technical communicators find employment in medical, scientific, high tech, business, university, and government settings. They may write white papers, tutorials, reference and procedure manuals, help systems, user assistance video scripts, grants and proposals, and more.

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**Certificate**

**Art New Media: Foundation Certificate**

This entry level certificate introduces the tools and context fundamental for the field of digital media.

**Certificate Requirements**

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTNM 302</td>
<td>Digital Basics for Art New Media</td>
<td>1.5</td>
</tr>
<tr>
<td>ARTNM 303</td>
<td>Graphic Design: Typography</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 305</td>
<td>History of Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>ARTNM 331</td>
<td>Integrating Digital Media with Traditional Media I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Units:</strong></td>
<td><strong>10.5</strong></td>
</tr>
</tbody>
</table>
Art New Media (ARTNM) Courses

ARTNM 302 Digital Basics for Art New Media

This course is an introduction to the digital environment for Art New Media. Topics include operating system(s), digital vocabulary, scanning, saving, and file formats. Distinctions between vector, bitmap, and page layout applications are made using Adobe Illustrator, Adobe Photoshop, and Adobe InDesign.

Upon completion of this course, the student will be able to:

- manage navigation skills on the operating system.
- analyze distinctions between vector and bitmap imagery.
- integrate scanning techniques.
- choose appropriate file formats.
- define digital vocabulary appropriate for the Art New Media environment.
- create work using Adobe software.

ARTNM 303 Graphic Design: Typography

This course covers the art of visual communication and introduces the tools and concepts of visual thinking. It emphasizes the potential of typography as an effective communications tool. Additionally, it also covers historical overviews, portfolio development, and client presentations, paired with the terminology and visual language of design through the creation and evaluation of individual projects.

Upon completion of this course, the student will be able to:

- apply the tools and materials of the graphic designer.
- apply the terminology of graphic design and typography.
- analyze the use of letterform and image in visual communication.
- create designs with the principles and problem solving process of graphic design.
- evaluate projects in terms of target audience.

ARTNM 305 History of Graphic Design

This course covers the history of visual communications as developed by ancient cultures through the present with an emphasis on commercial design, illustration, typographic development, and technological invention. It includes modern graphic design movements of the 20th century through the expansive media innovations of today. This course focuses primarily on analysis of design from a wide range of sources and cultures.

Upon completion of this course, the student will be able to:

- analyze the essential components of graphic design and their functions.
- differentiate between two-dimensional graphics, electronic graphics, and the graphic object.
- identify contributions of graphic design from many cultures and nations.
- compare the influence and historical importance of such contributions.
ARTNM 320 Facial Expression and Anatomy

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- draw the human skull in order to understand the three-dimensional form.
- apply facial muscular structure to the skull.
- evaluate the muscular code for universal facial expressions.
- create the human head with varying expressions using 2D media.
- create meaningful exaggerations of expression using 2D media.
- evaluate the muscles and muscle dynamics responsible for facial expression.

ARTNM 322 Beginning Digital Art

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- integrate working knowledge of digital media processes including software and hardware tools for the purpose of digital art making.
- construct creative visual and conceptual approaches to digital art making.
- synthesize contextual understanding of contemporary artistic explorations using new technology.
- integrate vocabulary of new media terms and practices for discussions and critiques of digital art.
- solve problems actively and independently to achieve creative objectives.

ARTNM 324 Digital Design

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- analyze and apply basic tools of Adobe Illustrator.
- create, manipulate, and edit images.
- create an effective project plan.
- evaluate completed design projects.
- create a professional portfolio presentation.

ARTNM 325 Intermediate Digital Design

Student Learning Outcomes

Upon completion of this course, the student will be able to:
• demonstrate the use of basic tools in Adobe Illustrator.
• analyze color modes, including RGB, spot color, and CMYK.
• compare the use and purpose of vector-based art vs. raster-based images.
• identify the characteristics and importance of visual composition as they relate to gestalt visual principles.
• produce advanced effects and techniques by combining tools in Adobe Illustrator.
• assemble design elements and typography using advanced techniques and Adobe Illustrator tools.

ARTNM 326 Digital Painting

Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: None.
Advisory: ART 300 and ARTNM 302
Transferable: CSU
Catalog Date: June 1, 2020

This course introduces the fundamental principles of color, drawing, and painting using the basic tools of Corel Painter. Visual communication skills of color, drawing, and painting are applied to produce individual portfolio-quality projects.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

• analyze and apply basic tools of Corel Painter
• apply tools to create, manipulate, and edit images
• develop an effective concept through research and drawn concepts, imagery, and refinement
• evaluate painting and drawing projects from initial concept through completion
• create a professional portfolio presentation

ARTNM 328 Beginning Digital Photo Imagery

Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: None.
Advisory: ART 300 and ARTNM 302
Transferable: CSU
Catalog Date: June 1, 2020

This course is an introduction to computer-based photographic imaging with emphasis on utilizing cutting edge digital imaging tools to realize design objects. Basic operating principles of Adobe Photoshop are covered. Topics include scanning, basic photo correction, selections, layer basics, adjustment layers, basic masking and channels, typography, vector drawings, and compositing. Design fundamentals are discussed. Topics include positive and negative space relationship, unity, balance, and basic color theory. Concept development is also introduced.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

• create photo manipulation using the basic tools of Adobe Photoshop.
• create digital composition with a successful positive and negative space relationship.
• create a unified digital composition.
• create a balanced digital composition.
• choose colors utilizing Color Theory.
• critique a visual composition using design fundamentals in unity, balance, and color theory.
• conceive a design concept using sketches and thumbnails.

ARTNM 330 Intermediate Digital Photo Imagery

Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: ARTNM 328 with a grade of "C" or better
Transferable: CSU; UC
Catalog Date: June 1, 2020

This course introduces the intermediate techniques of digital photo imagery in Adobe Photoshop. Topics include the terminology of digital photo imaging, intermediate masking, channel and curve techniques, photomontage history and techniques, intermediate black and white techniques, issues surrounding dynamic range, color correction, features of the Action and History palettes, exploration of Layer Blending Modes, printing and/or transferring images onto various different media, working with large format images, and commercial printers.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

• produce photomontages using intermediate skills associated with industry standard photo imaging software.
• analyze and apply intermediate compositing techniques such as masking.
• synthesize both the design concept and design process to produce sophisticated visual compositions.
• coordinate with service bureaus and commercial printers to produce quality output.
• analyze and critique photomontages in terms of design aesthetics and technical competence.

ARTNM 331 Integrating Digital Media with Traditional Media I

Same As: ART 339
Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: None.
This course combines the materials and techniques used in both new media technology and traditional art practices. It explores a wide variety of ideas, tools, and resources. Topics include history, theory, and practice surrounding digital and traditional image generation, image manipulation, image transfer, and material exploration. The course emphasizes developing unique forms of portfolio-quality projects demonstrating new approaches and methods of integrating digital media with traditional media forms.

This course is not available to students who have taken ART 339.

**Student Learning Outcomes**

Upon completion of this course, the student will be able to:

- combine materials and techniques used in both new media technology and traditional art practices.
- create successful compositions using knowledge of history, theory, and practice surrounding digital and traditional image generation.
- create successful compositions using knowledge of history, theory, and practice surrounding digital and traditional image manipulation.
- create successful compositions using knowledge of history, theory, and practice surrounding digital and traditional image transfer.
- generate dynamic portfolio-quality projects, which demonstrate new approaches and methods of merging digital media with traditional media.

**ARTNM 332 Digital Video**

<table>
<thead>
<tr>
<th>Units:</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Hours:</td>
<td>36 hours LEC; 54 hours LAB</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
<tr>
<td>Advisory:</td>
<td>ARTNM 302</td>
</tr>
<tr>
<td>Transferable:</td>
<td>CSU</td>
</tr>
<tr>
<td>Catalog Date:</td>
<td>June 1, 2020</td>
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</tbody>
</table>

This course applies the principles of cinematography and editing to the production of digital video. Industry standard software is employed to capture/import, edit, and produce high-end visual productions. The course includes transitions, multiple layers, alpha channels, and composite green screen segments. Evaluation of multimedia projects containing video segments in terms of design aesthetics and technical competence is included. This course examines the genres of documentary, short narrative film, title sequencing, and experimental film.

**Student Learning Outcomes**

Upon completion of this course, the student will be able to:

- critique and apply the basic principles and practices of digital video editing.
- apply the principles of cinematography to the creation of digital video.
- create digital video within the software production environment.
- create plans for digital video segments, using appropriate formats and compression options for output.
- evaluate multimedia projects containing video segments in terms of design aesthetics and technical competence.

**ARTNM 352 Design for Publication**

<table>
<thead>
<tr>
<th>Units:</th>
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<tbody>
<tr>
<td>Hours:</td>
<td>36 hours LEC; 54 hours LAB</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
<tr>
<td>Advisory:</td>
<td>ART 320 or ARTNM 310 AND ARTNM 302.</td>
</tr>
<tr>
<td>Transferable:</td>
<td>CSU</td>
</tr>
<tr>
<td>Catalog Date:</td>
<td>June 1, 2020</td>
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</tbody>
</table>

This course introduces the basic operating principles of digital page layout software using Adobe InDesign. Principles of typography and the development of the printed page are applied to individual portfolio-quality projects. Areas of focus include book, magazine, and newspaper design, as well as publications such as newsletters, journals, and catalogs. An overview of promotionals, such as flyers, posters, and brochures is also included.

**Student Learning Outcomes**

Upon completion of this course, the student will be able to:

- define the terminology of type.
- apply typography in various kinds of publications.
- analyze how type determines the messages communicated.
- relate the function of typography to other design elements.
- apply grid systems to page composition.
- evaluate layout design for a wide variety of publications.
- create a document that includes master pages and folios.
- create a document that includes typography, imported images, and text documents.
- determine color palette for a document.

**ARTNM 354 Digital Prepress**

<table>
<thead>
<tr>
<th>Units:</th>
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<tbody>
<tr>
<td>Hours:</td>
<td>36 hours LEC; 54 hours LAB</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>ARTNM 352 with a grade of &quot;C&quot; or better</td>
</tr>
<tr>
<td>Advisory:</td>
<td>ARTNM 302 AND ENGRD 116 OR ESLR 320 and ESLW 320</td>
</tr>
<tr>
<td>Transferable:</td>
<td>CSU</td>
</tr>
<tr>
<td>Catalog Date:</td>
<td>June 1, 2020</td>
</tr>
</tbody>
</table>

This course introduces digital prepress for graphic design using industry standard software, like Adobe InDesign. Areas of focus include desktop production for commercial offset printing, preparation of print-ready digital files, paper selection, and the language necessary to properly communicate with commercial printers. Field trips may be required.

**Student Learning Outcomes**

Upon completion of this course, the student will be able to:

- apply prepress skills with page layout software
• define terms to properly communicate with commercial printers using industry language
• prepare camera-ready digital files for commercial offset printing, digital, and silk screen methods
• analyze different types of paper in relation to requirements for printing and identify the appropriate paper for the job
• identify printing presses and determine which press matches specific job requirements
• organize digital files

ARTNM 358 College Magazine: Art Selection and Editing

Units: 1 - 2
Hours: 12 - 24 hours LEC; 18 - 36 hours LAB
Prerequisite: None.
Advisory: ARTH 300 and ARTNM 302
Transferable: CSU
Catalog Date: June 1, 2020

This course provides instruction in the editing of ARC’s college magazine, the American River Review, for national competitions sponsored by organizations such as the Columbia Scholastic Press Association and the Associated Collegiate Press. The course focuses on the implementation of a submission process for art work including art handing, tracking of submissions, photography for print and evaluation of submissions. It may be taken four times for credit. A portion of this course may be offered in a TBA component of 6-20 hours which may include photographing 2D and 3D artwork, scanning or photographing photographic artwork, downloading or scanning digital submissions, and production organization such as reformating and naming files, organizing files into media groups for evaluation.

Student Learning Outcomes

Upon completion of this course, the student will be able to:
• define and articulate criteria used for the critique of visual art in competitions
• critique art work submissions
• analyze art works based on defined criteria for competitive panels
• compare and contrast the merits of submitted artwork
• evaluate visual art based on defined criteria
• select visual art for publication for a magazine submitted for competition
• apply production techniques for magazine quality digital images
• compile submissions for entry in competition

ARTNM 359 College Magazine: Design and Production

Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: None.
Advisory: ARTNM 302, 324, 328, 352, or 354
Transferable: CSU
Catalog Date: June 1, 2020

This course provides instruction in the design and production of ARC’s college magazine, the American River Review, for national competitions sponsored by organizations such as the Columbia Scholastic Press Association and the Associated Collegiate Press. The course focuses on the graphic design, digital production, and printing of a literary and fine art magazine as well as the publicity, marketing, fund-raising, and distribution of the magazine. It provides the design staff a collaborative experience with the editorial staff taught by the English Department. It may be taken four times for credit.

Student Learning Outcomes

Upon completion of this course, the student will be able to:
• demonstrate leadership ability and group effectiveness in the production of a college magazine.
• develop and implement graphic design concepts into a literary and art magazine.
• develop and produce typographic solutions, visual grid systems, stylizing headings and paragraphs and special feature page layouts.
• explain the principals of visual communication as they relate to page layout and legibility.
• produce industry standard print ready PDF files.
• describe the basic departmental structure of a graphic design studio.
• apply basic work flow management systems used by graphic design studios to meet high pressure deadlines.
• describe core digital production issues as they relate to one color and four-color process printing.
• relate basic raster and vector art requirements as they relate to digital file preparation used for off-set printing.
• collaborate effectively with editorial and design teams to compete in national magazine competitions.

ARTNM 370 Introduction to Illustration

Same As: ART 314
Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: ART 300 with a grade of “C” or better
Transferable: CSU
Catalog Date: June 1, 2020

This course is a survey of the history of illustration, defining areas of specialization and the illustrator’s role in visual communication. The appropriate use of materials, tools and methods is evaluated. Illustration is analyzed as a method of visual problem solving through a series of projects with varied applications. This course is not open to students who have taken ART 314.

Student Learning Outcomes

Upon completion of this course, the student will be able to:
• describe the history of Illustration.
• examine areas of specialization of illustration and analyze required skills for Illustrators.
• apply illustration techniques with a variety of media.
• produce a range of visual styles.
• evaluate the appropriate style and media choice in terms of client, audience and print methods.
ARTNM 372 Character Design

This course introduces the visual development of characters based on archetypal patterns. Students will consider backstory, personality, and physical attributes. Fundamental drawing skills such as shape, form, anatomical structure, and motion will be included. Both digital and traditional media are applied. It also covers the graphical development of characters for animation, games, comics, graphic novels, children’s books, and illustrated novels. It is not open to students who have completed ART 317.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- develop a comprehensive process for designing characters including character profile, reference, thumbnails, and refinements.
- quickly concept multiple variations for a character including body type, head structure, facial expression, motion studies, and costume.
- differentiate multiple characters based on clear, definable silhouettes.
- develop costumes for a character based on time period, environment, and social class.
- produce accurate turnarounds for a character.

ARTNM 373 Storyboarding

This course introduces the storyboarding process for a range of industries, from film and game entertainment to the industrial and medical industries. It includes creating artwork for the visual interpretation of scripts and provided concepts, as well as developing original ideas. In addition, conceptual exercises, drawing practice, and the use of cinematic rules used in the industry are covered. Topics also include scale and camera angle, camera movement, character staging, composition, basic editing processes, creating animatics, and story reels.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- understand the visual language of cinematic storytelling.
- analyze the three act storytelling structure.
- apply the three act storytelling structure to film.
- demonstrate the ability to translate a script into a storyboard sequence.
- demonstrate the ability to create original story content and translate it into an animatic storyboard sequence.
- prioritize and budget time for storyboarding.

ARTNM 401 Introduction to Web Design

This course introduces technical and conceptual aspects of creating interactive visual media for screen-based delivery. It concentrates on designing standards-based web sites and applying standardized best practices to web design. This course introduces the basics of layout for visual communication by tightly integrating the design concepts with technical execution in a web environment. It also applies industry-standard authoring tools, and closely examines the meaning and validity of interactivity. Meaning and validity of interactivity are closely examined.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- design standards-based websites integrating basic design principles into the application of industry-standard authoring tools
- produce a design from idea to publishing applying industry-standard design workflow
- build information architecture for effective content flow
- create meaningful interactivity
- test and advertise published websites
- critique and analyze websites for their effectiveness in visual communication

ARTNM 402 Intermediate Web Design

This course covers production and intermediate design processes for the web with an emphasis on visual design. It employs various industry standard software applications to create original graphics, control layout and type, process images, and publish professional web pages and/or sites. Topics include an in-depth discussion on the processes and the strategies of combining text, images, animation, video, and audio elements to create compelling visual experiences for web users.
Student Learning Outcomes

Upon completion of this course, the student will be able to:

- create web pages and sites using intermediate skills associated with standard web authoring tools.
- design sophisticated visual compositions and layouts for the web and mobile devices.
- synthesize both the design concepts and production process to build web projects.
- create interactions on web pages that use digital media and simple animations to increase usability.
- select and apply appropriate navigation patterns for a wide range of screen sizes.
- build and test prototypes for usability.
- analyze and critique a website in terms of design aesthetics and technical competence.

ARTNM 404 Interactive Basics

This course introduces the design and delivery of rich interactive content suitable for graphical experiences across personal computers, mobile devices, and screens. Topics include generating interactivity between vector-based graphics, animation, integration of digital audio, raster graphics, and digital video. Industry standard workflow from image authoring to interactive authoring is discussed in detail. Visual design principles and interface design concepts are integrated into the making of portfolio-quality projects.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- create images and animation using the tools of a web authoring software.
- create and modify simple objects using design principles.
- create images using layers to form successful composition.
- design the interactivity of sound, video, and animation into a website and mobile device ready website.
- create interactive interface elements using scripting.
- create multimedia web projects to the published to the Web.

ARTNM 405 Digital 2D Animation

This course provides techniques for using the traditional principles of animation with industry-standard software. Topics include animating a bouncing ball, ball with a tail, ball with legs, full body bipedal, and a face synchronized to audio. Character animation topics involve locomotion, such as walking and jumping, using the traditional principles. Technical issues, such as frame-by-frame animation (cell animation), rotoscoping, interpolated or f-curve animation, are discussed and applied. Projects can be published on the Web, CD-Rom, DVD, and video.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- apply the twelve principles of animation to a bouncing ball.
- create humanoid locomotion using the twelve principles of animation.
- analyze and apply walk mechanics to humanoid characters.
- create basic facial animation synchronized to audio.
- analyze and apply the visual component of a phoneme, known as viseme.
- create animations with personality and mood.
- critique animations on a daily basis.
- incorporate criticisms into animations on a daily basis.

ARTNM 406 Design for Tablets

This course introduces production and design processes of tablet-based media. Various industry standard software applications are employed to create compatible websites, digital documents, PDF presentations, and ePub creations. Topics include the processes and the strategies of combining text, images, animation, video, and audio elements to create compelling visual experiences for tablet-oriented mobile media.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- explore trends in tablet-oriented design in regards to size, format, and layout.
- determine which publication format works best to communicate design content.
- analyze and compare the production capabilities of various design software.
- create design layout, navigation system, and media content using mobile design principles.
- identify computer languages used for mobile media design.
ARTNM 420 Introduction to 3D Modeling

This course introduces computer-generated three-dimensional, or CG 3D, modeling using industry standard software. The primary focus of this course is modeling using polygons, surfaces, and curves to produce quality demo reel renders of the models. Objects range from simplistic primitive shapes to sophisticated models of animals and plants. Software application tools, such as Autodesk Maya and Pixologic Zbrush, are applied to produce content for use in 3D printing, film, game, fine art, broadcast, medical and industrial animation, and more.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- create portfolio quality polygon meshes based on found objects.
- create portfolio quality polygon meshes by translating a 2D image to a 3D object.
- compare and contrast form and space to shape and line.
- research industry standard modeling techniques.
- critique the level of realism and believability of images, according to industry standards.
- create portfolio quality images of a still life from found objects.

ARTNM 421 3D Character Modeling

This course is a continuation of ARTNM 420. Industry techniques and issues related to humanoid character modeling are analyzed and applied. Industry issues, such as the topology flow of human anatomy, facial blend targets, and joint correction, are developed. Clothing, hair, and accessories are added to the characters, strictly following concept designs.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- analyze the human anatomical structure for static and dynamic characters.
- create accurate topology for face deformation.
- create accurate edge flow for deformation by assessing movement of human joints, muscles, bone, fats, and skin.
- create facial blend targets for lip synching and facial expression.
- create clothing and hair that naturally flow with the character.
- create a character based on concept designs, strictly following the original concept.
- create a template male and female face and body.
- create an image reference library for character modeling.

ARTNM 422 3D Animation

This course provides 3D animation techniques using industry standard software. It covers the traditional principles from the golden years of Disney Studios as they are applied and translated to the computer-generated 3D (CG 3D) environment, and also to characters that walk, breathe, and act according to the twelve principles of animation. Topics also include weight, thought process, and the wave principle. Technical issues, such as walking along an uneven ground, importing and blending MoCap data, and locomotion around obstacles, are addressed.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- apply the twelve animation principles to objects and characters using industry standard software.
- differentiate keyframe and f-curve animation and use the strengths of both techniques.
- differentiate pose-to-pose animation and straight-ahead animation and use the strengths of both techniques.
- create a demonstration reel quality animation.
- create clear poses blocking the storytelling keys of a shot.
- critique animations and regularly improve upon animations.
- communicate thought process and weight in the animation of characters.
- create animations of bipedal characters.

ARTNM 423 3D Texturing

This course introduces computer-generated three-dimensional, or CG 3D, modeling using industry standard software. The primary focus of this course is modeling using polygons, surfaces, and curves to produce quality demo reel renders of the models. Objects range from simplistic primitive shapes to sophisticated models of animals and plants. Software application tools, such as Autodesk Maya and Pixologic Zbrush, are applied to produce content for use in 3D printing, film, game, fine art, broadcast, medical and industrial animation, and more.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- create portfolio quality polygon meshes based on found objects.
- create portfolio quality polygon meshes by translating a 2D image to a 3D object.
- compare and contrast form and space to shape and line.
- research industry standard modeling techniques.
- critique the level of realism and believability of images, according to industry standards.
- create portfolio quality images of a still life from found objects.
This course provides texturing techniques, or image mapping, using industry standard software, such as Adobe Photoshop, Pixologic Zbrush, and Autodesk Maya. Topics include photo-manipulation, unwrapping and painting hard-surface and sub-division surface models and creating a texture library. Environment and character-texture maps are created using image-mapping techniques.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- create textured surfaces for computer-generated 3D objects.
- prepare unwrapped objects for image mapping.
- create environments and atmospheres from image mapping and procedural textures.
- create textures using image mapping and procedural mapping.
- create textures for organic characters.
- differentiate texture solutions for varying final outputs.
- create a texture library from photographic and hand painted imagery.

ARTNM 429 3D Rigging and Rig Building

Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: ARTNM 420 with a grade of "C" or better
Advisory: ARTNM 421 and 422
Transferable: CSU
Catalog Date: June 1, 2020

This course provides skills for the articulation of computer-generated three-dimensional, or CG 3D, objects. Projects include the creation of rigs for inanimate objects with the intent to animate, and the creation of a full body rig for bipedal and quadrupedal characters. Scripting languages and rig building tools are utilized to expedite the rigging process. 3D production issues, such as interfaces for animators, are addressed.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- create rigs that articulate the range of movements of an object.
- diagnose the needs of an object's movement.
- create a concise set of animation controls.
- create rigs that are true to the material of an object.
- create supporting rigs and rig elements that the rigging team can apply to a set of objects.
- research and proficiently apply math and programming skills to solve production problems.
- plan and communicate the needs of the object verbally and in written form to the rigging team.
- create portfolio-quality rigs.

ARTNM 431 3D Short Production

Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: ARTNM 420 or 422 with a grade of "C" or better
Transferable: CSU
Catalog Date: June 1, 2020

This course surveys and practices the pipeline of computer generated three dimensional (CG 3D) imagery based on real world short production scenarios; productions that are three minutes or less. The essential skills needed to survive in the Sacramento Valley CG 3D markets are covered. Areas of focus include a variety of real world short production scenarios, such as court room scene reenactment, work-at-home online markets, small business CG 3D logo, as well as visualization projects in the medical, invention, architectural, and landscaping fields.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- assess the CG 3D production pipeline and apply the pipeline as defined by the needs of the client.
- create a visualization based on a client's product plans.
- critique and revise work routinely to maintain a competitive edge in the CG 3D markets.
- creatively solve production problems in order to deliver content on time and on budget.
- create a demonstration reel designed with his/her specific strengths using the CG 3D production pipeline.
- create an online presence using free web resources and nominally priced resources to expose his/her demonstration reel to gain employment.
- choose techniques for projects confidently knowing how to solve the unique production problems.

ARTNM 450 Portfolio for Art New Media

Units: 3
Hours: 36 hours LEC; 54 hours LAB
Prerequisite: Completion of 9 units from one Art New Media Certificate with a grade of "C" or better
Transferable: CSU
Catalog Date: June 1, 2020

The course provides essential skills, strategies and processes involved in organizing, selecting, writing and marketing one's creative work. Topics include file organization, file accessibility and backup, research techniques, target identification, resume building, letter of interest, portfolio construction, building resumes, interview techniques, interview body language, job research, and portfolio presentation. The portfolio can be tailored for application for jobs in the creative industry, transfer to 4-year art or graphics programs, graduate schools, gallery exhibitions, artist residencies, scholarships and artist grants.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

- evaluate opportunities in the creative fields.
- create a resume tailored to art/design-related goals.
- research requirements for the job or school program desired.
- evaluate and compile a portfolio with examples of work to target a job or school program desired.
- professionally present the portfolio.
- examine interview techniques as they pertain to body language, mental preparation, standard interview questions and answers.

**ARTNM 495 Independent Studies in Art New Media**

<table>
<thead>
<tr>
<th>Units:</th>
<th>1 - 3</th>
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</thead>
<tbody>
<tr>
<td>Hours:</td>
<td>54 - 162 hours LAB</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
<tr>
<td>Transferrable:</td>
<td>CSU</td>
</tr>
<tr>
<td>Catalog Date:</td>
<td>June 1, 2020</td>
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</tbody>
</table>

Independent Study is an opportunity for the student to extend classroom experience in this subject, while working independently of a formal classroom situation. Independent study is an extension of work offered in a specific class in the college catalog. To be eligible for independent study, students must have completed the basic regular catalog course at American River College. They must also discuss the study with a professor in this subject and secure approval. Only one independent study for each catalog course will be allowed.

**ARTNM 498 Work Experience in Art New Media**

<table>
<thead>
<tr>
<th>Units:</th>
<th>1 - 4</th>
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</thead>
<tbody>
<tr>
<td>Hours:</td>
<td>60 - 300 hours LAB</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
<tr>
<td>Enrollment Limitation:</td>
<td>Students must be in a paid or unpaid internship, volunteer position, or job related to art new media with a cooperating site supervisor. Students are advised to consult with the Art New Media Department faculty to review specific certificate and degree work experience requirements.</td>
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<tr>
<td>Advisory:</td>
<td>Eligible for ENGRD 310 or ENGRD 312 AND ENGW 300; OR ESLR 340 AND ESLW 340.</td>
</tr>
<tr>
<td>Transferrable:</td>
<td>CSU</td>
</tr>
<tr>
<td>General Education:</td>
<td>AA/AS Area III(b)</td>
</tr>
<tr>
<td>Catalog Date:</td>
<td>June 1, 2020</td>
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</table>

This course provides students with opportunities to develop marketable skills in preparation for employment or advancement within the field of art new media. It is designed for students interested in work experience and/or internships in transfer-level degree occupational programs. Course content includes understanding the application of education to the workforce, completion of Title 5 required forms which document the student's progress and hours spent at the work site, and developing workplace skills and competencies.

During the semester, the student is required to complete 75 hours of related paid work experience, or 60 hours of related unpaid work experience for one unit. An additional 75 or 60 hours of related work experience is required for each additional unit. All students are required to attend the first class meeting, a mid-semester meeting, and a final meeting. Additionally, students who have not already successfully completed a Work Experience course will be required to attend weekly orientations while returning participants may meet individually with the instructor as needed. Students may take up to 16 units total across all Work Experience course offerings. This course may be taken up to four times when there are new or expanded learning objectives. Only one Work Experience course may be taken per semester.

**Student Learning Outcomes**

Upon completion of this course, the student will be able to:

- demonstrate application of industry knowledge and theoretical concepts in the field of art new media related to a transfer degree level career as written in the minimum three (3) learning objectives created by the student and his/her employer or work site supervisor at the start of the course.
- make effective decisions, use workforce information, and manage his/her personal career plans.
- behave professionally, ethically, and legally at work, consistent with applicable laws, regulations, and organizational norms.
- behave responsibly at work, exhibiting initiative and self-management in situations where it is needed.
- apply affective leadership styles at work, with consideration to group dynamics, team and individual decision making, and workforce diversity.
- communicate in oral, written, and other formats, as needed, in a variety of contexts at work.
- locate, organize, evaluate, and reference information at work.
- demonstrate originality and inventiveness at work by combining ideas or information in new ways, making connections between seemingly unrelated ideas, and reshaping goals in ways that reveal new possibilities using critical and creative thinking skills such as logical reasoning, analytical thinking, and problem-solving.

**ARTNM 499 Experimental Offering in Art New Media**

<table>
<thead>
<tr>
<th>Units:</th>
<th>0.5 - 4</th>
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<tbody>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
<tr>
<td>Transferrable:</td>
<td>CSU</td>
</tr>
<tr>
<td>Catalog Date:</td>
<td>June 1, 2020</td>
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</tbody>
</table>

**Faculty**

**Daniel Herrera**
Adjunct Faculty

**Craig Martinez**
Professor

**William Mead**
Adjunct Faculty

**Stephen Mehallo**
Adjunct Faculty

**Betty Nelsen**
Adjunct Faculty

**Jeffrey Rochford**
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Web: Jeffrey Rochford's Profile Page (/about-us/contact-us/faculty-and-staff/directory/jeffrey-rochford)