Information Technology Cluster

Web and Digital Communications Pathway –

**3D Animator**—This major prepares students to utilize animation skills to develop products for the Web, mobile devices, computer games, entertainment training simulations, and live video. They learn to create an animated sequence that conveys a story through the application of traditional film making principles in a 3D computer graphics environment. Students gain skills required for Adobe Certified Expert, Adobe Certified Associate, and/or Autodesk industry certifications. (Advanced Effects for Motion Graphics is an optional course that may be added to this career major).

**3D Modeler**—This major prepares students to develop the animated characters and models used in such fields as television, motion pictures, the Internet and the computer games industries. Students will utilize modeling, rigging, and rig building to develop digital characters and 3D models, including shaping the 3D geometry and the animation controls for manipulating the geometry. Students gain skills required for Adobe Certified Expert, Adobe Certified Associate, and/or Autodesk industry certifications.

**Animator**—This major prepares students to work with animation in such fields as television, motion pictures, the Internet and the computer games industries. They learn to apply advanced color and design theories to create graphically rich and intuitive websites, productions and/or publications. Students use advanced animation techniques to develop, manage and maintain engaging experiences for delivery to viewers on the web or other mobile devices. Students develop a digital portfolio and learn electronic marketing strategies to promote their work. Students gain skills required for Adobe Certified Expert, Adobe Certified Associate, and/or Certified Internet Webmaster industry certifications.

**Audio Production Engineer**—This major prepares students to work with audio whether for film, broadcast production, podcasting, or radio production. Students will learn the science of audio, terminology, and become familiar with audio editing software used to edit, mix, and produce an effective audio segment. Students will learn about audio production equipment and will complete an audio project from the initial setup to the final mixdown. Students gain skills required for Apple Certified Pro and Digidesign industry certifications.

**Audio Recording Technician**—This career major prepares students interested in the field of audio to gain a better understanding of the theory of sound, the importance of microphone selection and placement, recording voice and instrumental, recording techniques (location, studio, video, and Foley), system configuration, and troubleshooting. Students will learn to set up equipment, operate mixers, adjust patch panels, and maintain accurate records of activities and inventories of equipment and files. Students will complete projects both individually and in groups.

**Desktop Publisher/Graphic Designer**—This major prepares students for careers in electronic publishing. Students acquire fundamental skills in image creation and management procedures and techniques as they create, revise, optimize and export graphics for video, print and web publishing. Students learn digital photography and understand copyright basics. Students gain skills required for Adobe Certified Expert and Adobe Print Specialist industry certifications.
**Digital Video Producer**—This major prepares students to use digital media to create a variety of visual products such as movies, computer games, and commercials. Students master non-linear computer editing techniques for both remote production and studio production sites. They learn to use professional audio editing software to edit, mix, and produce quality sound effects for video presentations. Students complete numerous projects as they acquire skills in advanced video editing and production. Students gain skills required for Adobe and/or Apple industry certifications.

**Digital Video Production Assistant**—This major prepares students to provide technical assistance in the digital video production environment. Students master non-linear video editing techniques as they learn to develop and enhance visual communication and storytelling. In addition, students acquire skills in videography and understand copyright basics. Students gain skills required for Apple Certified Pro certification. (Broadcast Production is an optional course that may be added to this career major).

**Digital Video Technician**—This major prepares students to use digital media to create a variety of visual products such as movies, computer games, and commercials. Students master non-linear computer editing techniques and become familiar with professional audio editing software used to edit, mix and produce quality sound effects. They complete numerous projects to build a portfolio as they acquire skills in advanced video editing and production. Students gain skills required for Adobe and/or Apple industry certifications.

**E-Business Specialist**—This major prepares students to design and market their own websites. Students become proficient in the use of web authoring tools and design strategies to create graphically rich, intuitive and secure websites. Students learn to conduct and market business online and to manage the technology issues associated with constructing an electronic-commerce website. Students gain skills required for CIW, WOW, and/or Adobe industry certifications.

**E-Commerce Designer**—This major prepares students to design and market their own websites. Students become proficient in the use of web authoring tools, design strategies and animation to create graphically rich, intuitive and secure websites. They develop and perform relational database queries using SQL concepts, learn to conduct and market business online, and manage the technology issues associated with constructing an electronic-commerce website. Students gain skills required for CIW, WOW, and/or Adobe industry certifications.

**Flash Developer**—This major prepares students to build highly animated, interactive websites using Adobe® Flash® software. Students learn the principles of XHTML and CSS and become proficient in developing websites. Students integrate PHP and XML to build server-side Flash® applications as they master Flash® interactivity with advanced ActionScript techniques. Students research electronic marketing strategies and utilize appropriate design principles as they develop a brand identity and build customer relations for a business. Students gain skills required for Adobe, WOW, and/or CIW industry certifications.

**Graphic Design Specialist**—This major prepares students for careers in graphic design for websites, video and/or publications. Students create, revise, optimize and export graphics as they acquire advanced skills in web design and animation to apply to a digital portfolio. Students also learn digital photography and copyright basics and develop electronic marketing strategies to promote their work. Students gain skills required for Adobe Print Specialist, Adobe Certified Associate and/or Certified Internet Webmaster industry certifications.
Interactive Media Specialist— This major prepares students to create and edit multimedia for video, print and web publishing. Students acquire fundamental web authoring skills and learn design strategies through the application of XHTML and Cascading Style Sheets. In addition, they master non-linear computer editing techniques to create, revise, optimize and export graphics for a variety of media. Students gain skills required for Adobe, CIW, and/or WOW industry certifications.

Motion Graphics Artist— This major prepares students to use video and/or animation technology to create the illusion of motion in multimedia projects. Students learn 2D and 3D animation tools and techniques to create, animate, revise, optimize and export professional graphics and animations for the Web, mobile devices, computer games, entertainment, training simulations, and/or video. Students gain skills required for Adobe, CIW, and Autodesk industry certifications. (The following are optional courses that may be added to this career major: 1) Advanced Digital Media Production, and 2) 3D Modeling and Rigging Techniques).

Multimedia Assistant— This major prepares students to create and edit graphics for video, print and web publishing. Students gain fundamental web authoring skills and design strategies along with digital photography skills. They learn advanced non-linear computer editing techniques as they complete video-based projects for broadcast production. Customer service, marketing, project management and professionalism are stressed. Students gain skills required for Adobe, CIW, WOW, and/or Apple industry certifications.

Multimedia Specialist— This major prepares students to create and edit graphics for video, print and web publishing. Students learn desktop publishing and graphic design techniques along with digital photography skills. Students design and edit motion graphics and visual effects and use digital video equipment and software to generate projects to DVD formats for a wide degree of playback compatibility. Students gain skills required for Adobe, CIW, WOW, and/or Apple industry certifications.

Special Effects Technician— The Special Effects Technician career major prepares students for entry-level animation positions. Students will learn to use appropriate tools and techniques to develop, design, and animate characters or graphics for television, film, computer, and video game production using advanced graphic design software. Students will focus on the audio, visual, and mechanical elements of special effects to design creative and technical projects with limited supervision. Students gain skills required for Adobe and Apple industry certifications.

Video Editor— This major prepares students to edit raw video camera footage into final products for viewing. Students master both non-linear computer editing techniques and real-time editing for professional digital video productions. Students also acquire skills in digital photography and learn copyright basics. They enhance web design and animation skills as they bring their ideas to life. Students gain skills required for Adobe Certified Expert and/or Apple Pro industry certifications. (Broadcast Production and Digital Editing & Production Photography are optional courses that may be added to this career major).

Video Game Designer— This major prepares students for careers as game developers, designers, and computer programmers for the video game industry. Students will learn the history of games, development of sprites, software engineering, game design, interactive fiction, user interfaces, artificial intelligence, game SDK’s, networking, multi-player games, game development environments, and commercialization of software. Students gain skills required for various certifications, including Autodesk Maya and 3ds Max, Adobe ACE, and Brainbench.
**Video Producer**— This major prepares students for careers in planning and coordinating various aspects of video production. In this major, students learn fundamental skills in image creation for video, print, and web publishing including digital photography and animation. They become familiar with professional audio editing software used to edit, mix and produce quality sound effects and acquire advanced skills in video editing and production. Students gain skills required for Adobe, CIW, WOW, and/or Apple industry certifications. (The following are optional courses that may be added to this career major: 1) Advanced Design Techniques, 2) Digital Editing & Production Photography, and 3) Advanced Digital Media Production).

**Video Production Assistant**— This major prepares students to provide assistance in the production of video recordings and programs. Students master non-linear computer editing techniques as they learn to develop and enhance visual communication. In addition, students acquire skills in digital photography and understand copyright basics. Students gain skills required for Adobe Certified Expert certification. (Broadcast Production is an optional course that may be added to this career major).

**Web Designer**— This major prepares students for proficiency in designing interactive websites. Students develop web authoring and design skills through the application of authoring and/or scripting languages as they design appealing websites. Students are immersed in the basic elements of design and composition including typography, color and information design. Students also focus on enhancing their creativity by developing a brand identity for a business. Students research marketing strategies and build customer relations through electronic marketing techniques. Students in this major gain the technical skills required for Certified Internet Webmaster, WOW Apprentice Web Designer, Adobe Certified Expert, Adobe Certified Associate, and/or WOW Academy industry certifications.

**Web Designer (Entry Level)**— This major prepares students for entry-level careers in developing and designing websites. Students acquire fundamental web authoring and design skills through the application of XHTML, Cascading Style Sheets and graphics packages. They learn to create, revise, optimize and export graphics for video, print and web publishing. Students build digital portfolios and develop electronic marketing strategies to promote their work. Students in this major gain the technical skills required for Certified Internet Webmaster, WOW Apprentice Web Designer, Adobe Certified Expert, and/or Adobe Certified Associate industry certifications.

**Web Developer**— This major prepares students to develop and design web applications and websites. Web developers create and specify architectural and technical parameters and direct website content, creation, enhancement and maintenance. Students develop web-authoring skills and utilize server-side scripting languages to design security-enhanced websites. They use the project cycle for web development to develop an application that is database driven. Students learn to conduct business online and to manage the technology issues associated with constructing an electronic-commerce website. They research electronic marketing strategies, build customer relations and use appropriate design principles to develop a brand identity for a business. Students gain skills required for CIW, WOW, Adobe, Oracle, and/or Microsoft industry certifications.

**Web Game Developer**— This major prepares students for creating dynamic browser-based games. A Web Game Developer will be fluent in HTML, CSS and JavaScript. This individual will be designing and implementing game features, performing game tests before releases and participating in the development of new game ideas and implementations. A Web Game Developer must stay up-to-date with technology advancements and new coding practices.
Web Producer—This major prepares students for careers in constructing and maintaining dynamic web sites. Students acquire fundamental and enhanced web authoring and design skills through the application of XHTML, Cascading Style Sheets and graphics packages. They learn to create, revise, optimize and export graphics for video, print and web publishing. Students utilize action-scripting and advanced multimedia and web video production techniques to deliver dynamic, data-driven content. They build digital portfolios and develop electronic marketing strategies to promote their work. Students in this major gain the technical skills required for WOW Apprentice Web Designer, Adobe Certified Expert, Adobe Certified Associate, Adobe Web Specialist, and/or Certified Internet Webmaster industry certification.

Web Specialist—This major prepares students to design, build and market a website. Students learn fundamental web authoring and design skills using XHTML, Cascading Style Sheets, and a graphics package for application of design principles. They research electronic marketing strategies, build customer relations and use appropriate design principles to develop a brand identity for a business. Students gain skills required for CIW, Adobe, and/or WOW Academy industry certifications.

Webmaster—This major prepares students for careers in designing, developing, marketing and/or maintaining a website. Webmasters generally manage all aspects of web operations. Students gain fundamental and enhanced web authoring, design and animation skills to become accomplished web designers. In addition, they develop and perform relational database queries using SQL concepts. They build digital portfolios and develop electronic marketing strategies to promote their work. Students in this major gain the technical skills required for WOW Apprentice Web Designer, Adobe Certified Expert, Adobe Certified Associate, Adobe Web Specialist, Oracle Database Administrator Certified Associate, and/or Certified Internet Webmaster industry certifications.

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